ORDER NO. VSD9802M608A

Service Manual

Volume 1

Mini DV

Digital Camera Recorder

AG-EZ10E

AC Adaptor

VW-AD3E

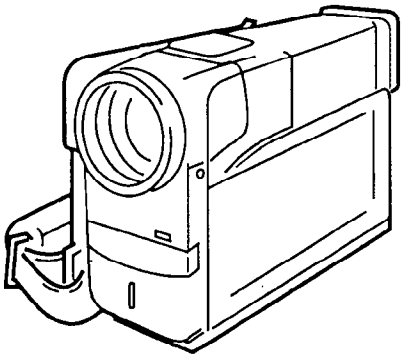
Sec. 1 *Operating Instructions*

Sec. 2 *Disassembly Procedures*

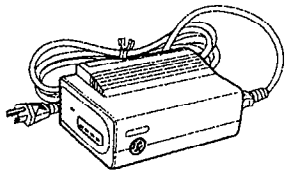
Sec.3 *Block Diagrams & Schematic Diagrams*

Sec. 4 *Exploded Views & Replacement Parts Lists*

Sec. 5 *VW-AD3E*



Model: AG-EZ10E



Model: VW-AD3E

ITEM	SPECIFICATION
POWER	Source: Battery Pack; 7.2V DC AC Adaptor; 7.9V DC Consumption: During Camera Recording Using The Viewfinder; 5.5W
RECORDING FORMAT	Digital Video SD Format
TAPE FORMAT	Mini DV Cassette Tape (Tape width 6.35mm)
TAPE SPEED	SP mode: 18.83 mm/s LP mode: 12.57 mm/s Record/Playback Time SP mode: 60 min. with DVM60 LP mode: 90 min. with DVM60
CAMERA	PICK-UP ELEMENT: CCD (Change Coupled Device)
VIDEO	STANDARD ILLUMINATION: 1,400 lux
	MINIMUM REQUIRED ILLMINATION: 1 lux
	LENS: 10 : 1 Wide-angle Power Zoom Lens (Optical capability) F1.4 Focal Length: 47mm Digital AI Auto Focus/Auto Iris Filter Diameter: 30.5 mm
	IMAGE SENSOR: 1/3 inch CCD Image Sensor
	VIEWFINDER: FORMAT: Digital Component
VIDEO	RECORDING FORMAT: Digital Component
	TELEVISION SYSTEM: CCIR; 625 Lines, 50 Fields PAL Colour Signal

ITEM	SPECITICATION
VIDEO	VIDEO OUTPUT LEVEL: 1.0 Vp-p, 75Ω S-VIDEO OUTPUT LEVEL; Y: 1.0 Vp-p 75Ω C: 0.3 Vp-p 75Ω
AUDIO	RECORDING FORMAT: Digital PCM Stereo; 16 bit (48 kHz/2 ch) 12 bit (32 kHz/4 ch)
	OUTPUT LEVEL: 316 mV, 600Ω
DIGITAL STILL PICTURE	Digital Still Picture Output, Control Signal Input/Output (Transfer rate: max. 115 kbps)
DIGITAL INTERFACE	DV Output Terminals (Compliant with IEEE 1394, 4-pin)
OPERATING TEMPERATURE	0 ~ 40°C
OPERATING HUMIDITY	10 ~ 80%
WEIGHT	Approx. 520g (without Battery Pack)
DIMENSIONS	Approx. 67 (W) × 95 (H) × 132 (D) mm
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. S-VIDEO Cable 1 pc. DC Input Cable 1 pc. AC Cable 1 pc. AV Cable 1 pc. Remote Controller 1 pc. Battery for Remote Controller 1 pc. Output Terminal Box 1 pc. Shoulder Strap 1 pc. 21 pin Adaptor 1 pc, Cassette Tape

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

INTRODUCTION

This Service Manual Volume 1 contains technical information such as Operating Instructions, Disassembly Procedures, Block Diagrams, Schematic Diagrams & Circuit Board Diagrams, Exploded Views & Parts Lists and AC Adaptor VW-AD3E sections which service personnel to understand and service the Panasonic DV Camera Recorder model AG-EZ10E and AC Adapter model VW-AD3E.

For other technical information such as Service Information, Maintenance & Mechanical Adjustment Procedures, Electrical Adjustment Procedures, please refer to the Service Manual AG-EZ10E Volume 2.

This service manual has been prepared for several models.

When servicing the AG-EZ10E, please ignore the information regarding the LCD monitor.

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INTRODUCTION

Caution for AC CORD (VJA0940 type)

Information for Your Safety

IMPORTANT

YOUR ATTENTION IS DRAWN TO THE FACT THAT RECORDING OF PRE-RECORDED TAPES OR DISCS OR OTHER PUBLISHED OR BROADCAST MATERIAL MAY INFRINGE COPYRIGHT LAWS.

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

FOR YOUR SAFETY

■ DO NOT REMOVE THE OUTER COVER.

To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

Caution for AC Mains Lead

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⟨ASTA⟩ or the BSI mark ⟨BSI⟩ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFETY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

■ IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

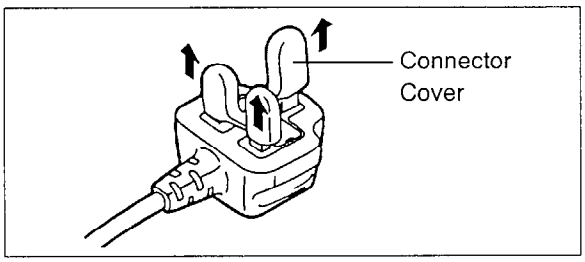
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚ .

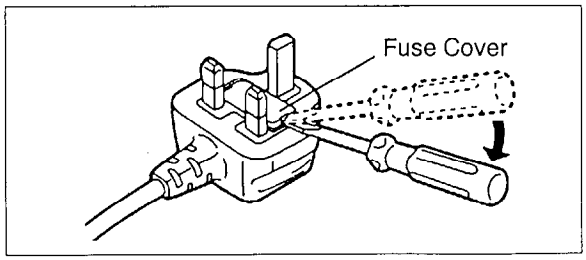
■ Before use

Remove the Connector Cover as follows.

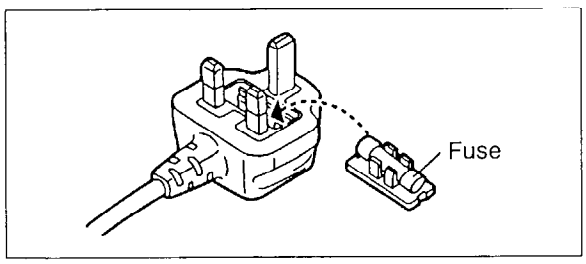


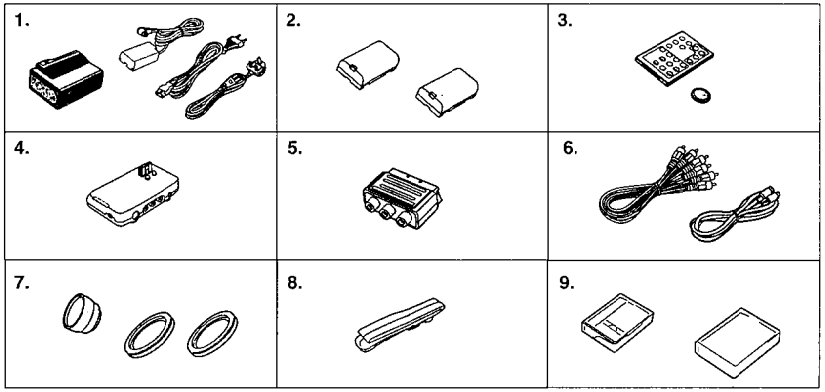
■ How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



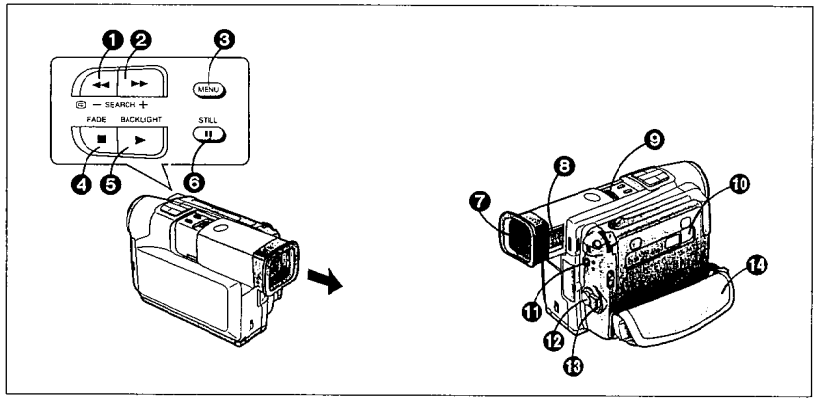
2. Replace the fuse and attach the Fuse cover.





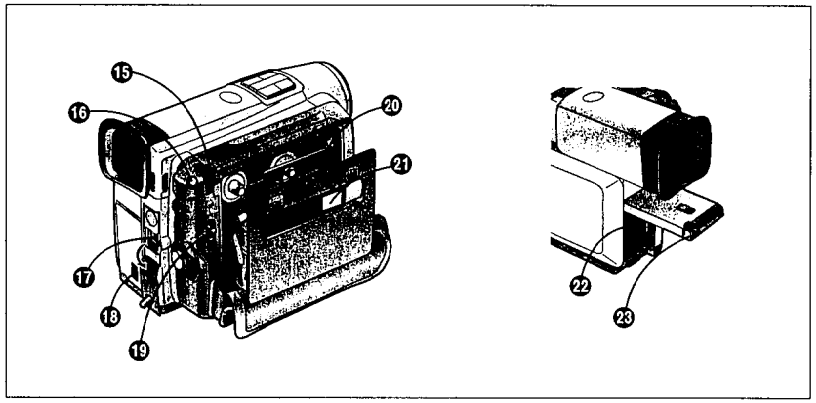
Standard Accessories

1. **AC Adaptor (➔ 16, 18)**
   To supply power to the Movie Camera.
   To charge the Battery.
   DC Input Cable and AC Mains Cable (➔ 16, 18)
   To connect the AC Adaptor to the Movie Camera and to an AC Mains socket.
2. **Battery Pack (➔ 18)**
   To supply the Movie Camera with power.
3. **Remote Controller and Button-Type Battery (➔ 92, 98)**
4. **Output Terminal Box [AV ONE TOUCH STATION] (➔ 52, 54, 102)**
   Equipped with AV Sockets, Edit Socket, Digital Still Picture Terminal, and Headphone Socket.
5. **21-pin Adaptor (➔ 52, 104, 106, 108)**
6. **AV Cable (➔ 52, 104, 106, 108)**
   S-Video Cable (➔ 52, 104, 106, 108)
7. **Filter Kit/Wide Conversion Lens (➔ 176)**
8. **Shoulder Strap (➔ 28)**
9. **Cassette/Cassette Adaptor (➔ 22, 178)**

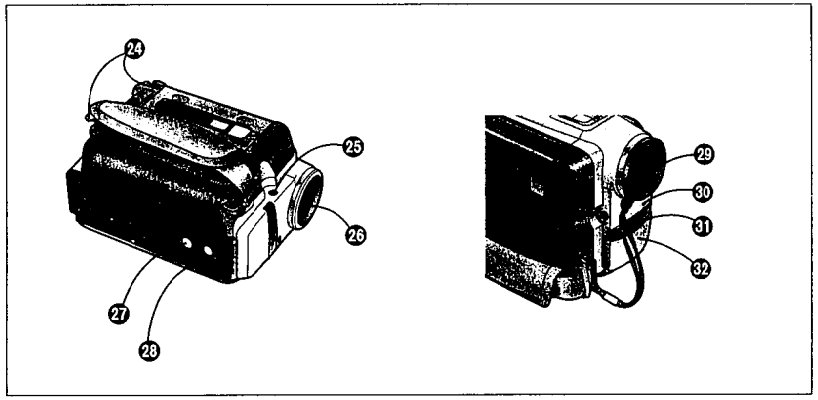


Controls and Components

1. **Reverse Search Button/Rewind/Review Button/Recording Check Button [◀◀] (➔ 32, 44, 46, 56)**
2. **Forward Search Button/Fast Forward/ Cue Button [▶▶] (➔ 46, 56)**
3. **Menu Button [MENU] (➔ 34, 40, 42, 58, 68, 74, 76, 78, 80, 82, 84, 86, 118, 126)**
4. **Fade Button/Stop Button [■] (➔ 44, 66)**
5. **Backlight Button/Play Button [▶] (➔ 32, 44)**
6. **Still Button/Pause Button [❚❚] (➔ 42, 50)**
7. **Finder (➔ 26)**
8. **Eyepiece Corrector Dial (➔ 26)**
9. **Multi-Function [PUSH] Dial (➔ 34, 40, 42, 50, 58, 68, 74, 80, 82, 84, 86, 118, 126, 130)**
10. **Cassette Compartment Lock Button [△ LOCK] (➔ 22)**
11. **VCR (Playback) Mode/Camera (Recording) Mode Button (and Lamps) (➔ 30, 44)**
12. **Recording Start/Stop Button (➔ 30)**
13. **Power Switch [POWER ON/OFF] (➔ 26, 30)**
14. **Grip Belt (➔ 28)**



15. **Zoom Lever [W/T] (➔ 36)**
16. **Photoshot Button [PHOTO SHOT] (➔ 38)**
17. **DV Terminal [DV]**
    To output digital signals.
    Connect it to digital video equipment with IEEE1394-compatible DV input terminal.
    ♦This terminal cannot be used to input digital signals into this Movie Camera.
18. **Battery Compartment Cover Open Lever [▲ BATTERY] (➔ 18)**
19. **Cassette Eject Button [⏏ EJECT] (➔ 22)**
20. **Cassette Compartment (➔ 22)**
21. **Cassette Compartment Window (➔ 22)**
22. **Battery Eject Lever (➔ 18)**
23. **Cover for DC Input Cable Slot (➔ 16)**



㉔ **Shoulder Strap Holders (➔ 28)**

㉕ **Microphone Socket [MIC]**
To connect an external microphone or audio equipment. (Connecting to this socket deactivates the built-in microphone.)

Socket:	M3-type
Impedance:	Less than 4.7 kohm
Type:	Stereo (When connecting a mono microphone, no sound is recorded on the right channel.)
Sensitivity:	Approx. –70 dB
Power Source for Microphone:	Unnecessary

㉖ **Lens**

㉗ **Tripod Receptacle**
To mount the Movie Camera on an optional tripod.

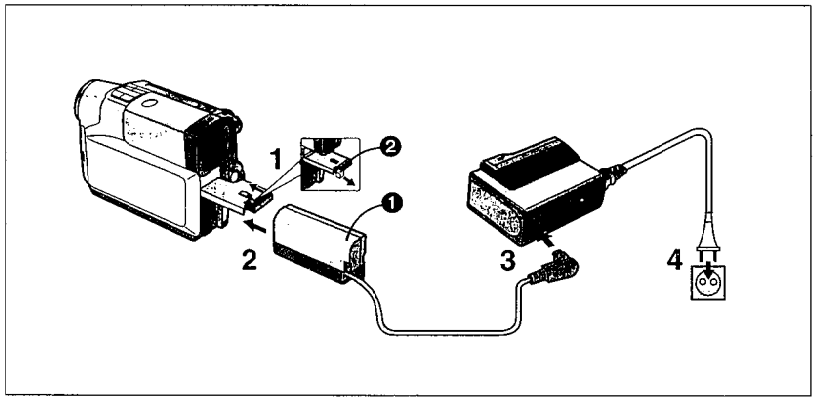
㉘ **Multi Terminal [MULTI] (➔ 52, 54, 102)**

㉙ **Lens Cap (➔ 54, 82)**

㉚ **Recording Lamp (➔ 30)**

㉛ **White Balance Sensor(➔ 150)/ Remote Control Sensor (➔ 100)**

㉜ **Microphone (built-in, stereo)**



The 3 Types of Power Supplies

1) AC Adaptor (supplied) to supply power from an AC mains socket
2) Car Battery Charger (optional) to supply power from a Cigarette Lighter Socket
3) Battery (supplied) (➔ 18)

■ Supplying Power from an AC Mains Socket

1 Slide the [▲ BATTERY] Lever upward to open the Battery Compartment Cover.

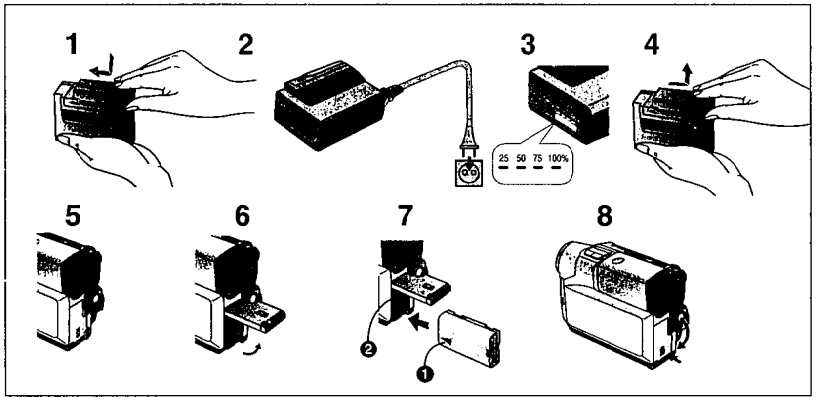
2 Insert the battery-shaped connector of the DC Input Cable ❶ into the Movie Camera.
Pull back the Cover for the DC Input Cable Slot ❷ and lift it. Pass the DC Input Cable through the slot and close the Battery Compartment Cover.

3 Connect the other end of the DC Input Cable to the AC Adaptor.

4 Connect the AC Mains Cable to an AC mains socket.
- Before disconnecting the AC Mains Cable, set the [POWER ON/OFF] Switch to [OFF].
- **If you use the Movie Camera for a long time, it becomes warm. However, this is normal.**

■ Supplying Power from the Cigarette Lighter Socket in a Car

You can use the optional Car Battery Charger VW-KBD1E to supply the Movie Camera with power from the Cigarette Lighter Socket in a car.
In addition, you can also use it to charge the Movie Camera's Battery.
- **After use, be sure to disconnect the Car Battery Charger from the Cigarette Lighter Socket.**
- Be sure to start the car engine before you connect the Car Battery Charger, otherwise the fuse may blow.
- Use the DC Input Cable supplied with the Movie Camera for connecting, not the one supplied with the VW-KBD1E.



■ Supplying Power with the Battery

The Battery was only minimally charged before shipping. Therefore, fully charge it before you use it for the first time.

1 Place the Battery on the AC Adaptor as shown above and slide it horizontally until it stops.

2 Connect the AC Mains Cable to the AC Adaptor and an AC mains socket.

3 When all four Charge Lamps on the AC Adaptor are lit, charging is finished.

4 Remove the Battery by sliding it in the opposite direction of Step 1 above.
•Also disconnect the AC Mains Cable.

5 Slide the [▲ BATTERY] Lever.

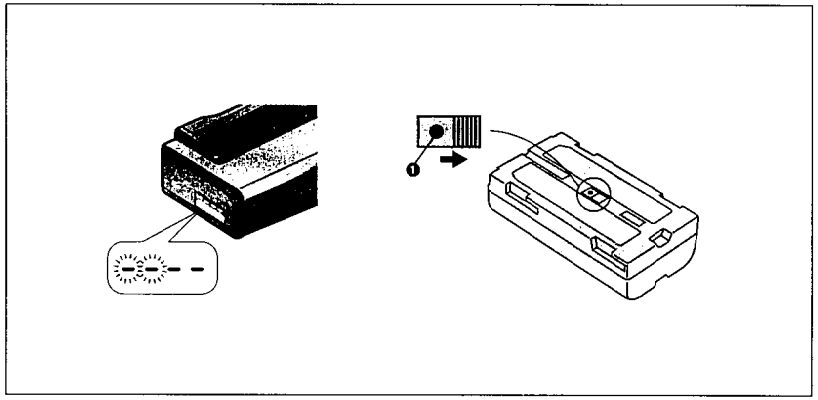
6 Open the Battery Compartment Cover.

7 Insert the Battery with ❶ pointing inside.

8 Close the Battery Compartment Cover so that it locks with a click.

Removing the Battery
Open the Battery Compartment Cover and push the Battery Eject Lever ❷.
- Hold your hand over the Battery Compartment to prevent the Battery from dropping.
- Before removing the Battery, set the [POWER ON/OFF] Switch to [OFF].

Caution
Be sure to insert the Battery with the [▲] mark pointing into the Movie Camera. If you insert it with the mark pointing outside, it could damage the Movie Camera.



Charging Time and Maximum Time for Continuous Recording

Battery No.	Charging Time	Max. Continuous Recording Time
Supplied	80 min.	100 min.
VW-VBD1E	80 min.	100 min.
VW-VBD2E	160 min.	180 min.
CGR-B/814	320 min.	420 min.

(The times shown in the above chart are approximations.)
The times listed above for your information indicate the duration of recording performed at an ambient temperature of 20°C and 60% relative humidity. The charging time may be longer when you charge the Battery at higher or lower temperature.

- ♦ During use and charging, the Battery becomes warm. The Movie Camera, too, becomes warm during use.
- ♦ When you repeatedly stop and restart recording, the recording time per Battery is shorter than listed above.
- • If you do not use the Battery for a long time, please read the Precautions for Storage (➔ 140).

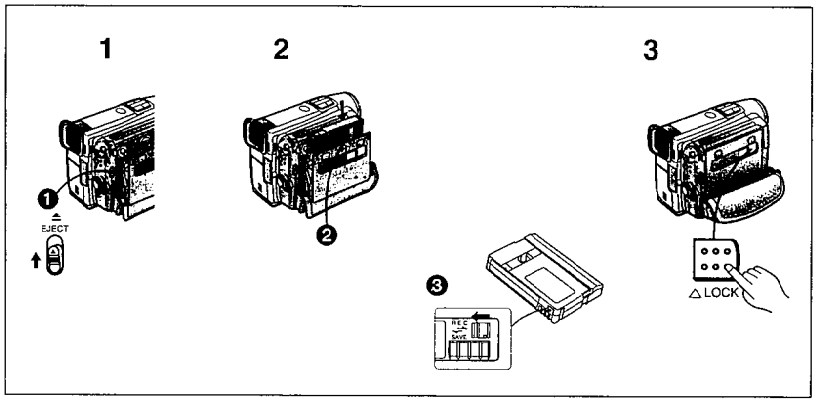
When the Charge Lamps Flash

When the internal temperature of the Battery or the ambient temperature is extremely high or low, the Charge Lamps on the AC Adaptor flash.

When the Charge Lamps flash slowly
The Battery is being charged, but charging takes longer than normally.

When the Charge Lamps flash in pairs
Charging is not possible. When the temperature becomes appropriate for charging, the Charge Lamps stop flashing and charging starts.

Using the Charge Confirmation Marker
You can use this marker to easily distinguish between charged and discharged Batteries.
For example, slide the knob so that the red dot (●) ❶ is visible after the charging is completed.



Inserting the Cassette

1 Slide the [⏏ EJECT] Lever ❶ upward to open the Cassette Compartment.

2 Insert the cassette.
Insert the cassette with its window in position ❷.

3 Close the Cassette Compartment and press the [△ LOCK] Button to lock the Cassette Compartment.

- • If the Movie Camera is supplied with power, above operation step 1 can be operated without turning on the Movie Camera.
- ♦ When opening or closing the Cassette Compartment, push down the Grip Belt so that it does not obstruct the opening and closing of the Cassette Compartment. Otherwise the Grip Belt may prevent the Cassette Compartment from opening completely, or it may get caught under the Cassette Compartment Cover and prevent it from closing properly.

- ♦ When inserting the cassette, make sure it faces in the right direction and then push in straight down until it stops.
- • When you insert a cassette onto which you have recorded before, use the Camera Search Function (➔ 56) to search for the position from which you want to continue recording.
- • When you insert a new cassette, rewind the tape to the beginning before starting to record.

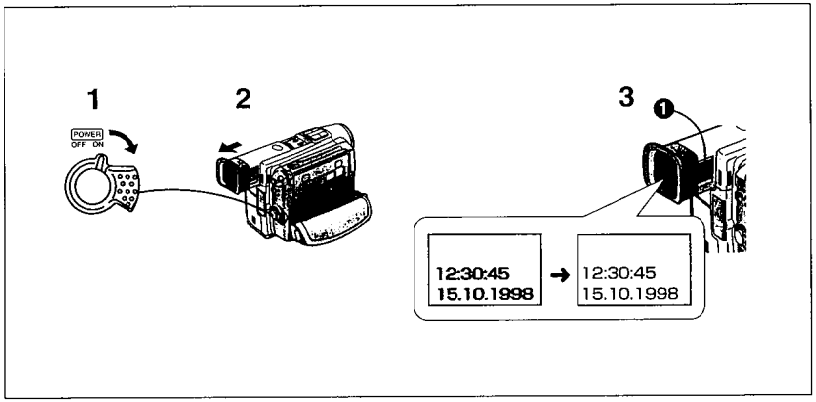
Preventing Accidental Erasure of Recordings
Opening the cassette's erasure prevention slider ❸ (sliding it in the direction of the [SAVE] arrow) prevents recording. To record again, close the erasure prevention slider (slide it in the direction of the [REC] arrow).

■ LP Mode

The desired recording speed can be selected with [REC SPEED] on the [MENU (OTHERS)] Menu. (➔ 118-122)

If you select the [LP] Mode, the possible recording time is 1.5 times as long as in the SP Mode.
Recording in the LP mode does not deteriorate the picture quality. However, the playback picture may contain mosaic-like patterns and certain functions may be restricted.

- • In the following cases, mosaic-like patterns may appear in the playback picture or the picture may not be played back correctly:
  - • When a cassette recorded in the LP Mode on this Movie Camera is played back on other digital video equipment.
  - • When a cassette recorded in the LP Mode on other digital video equipment is played back on this Movie Camera.
  - • When a cassette recorded in the LP Mode on this Movie Camera is played back on digital video equipment not featuring the LP Mode.
  - • In the Slow Motion or Still Advance Playback Mode. (➔ 48, 50)
  - • When using the Camera Search Function. (➔ 56)
- • As the recording track width in the LP Mode is smaller than the head width, recording new sound onto an already recorded cassette (audio dubbing) (➔ 88) is not possible.



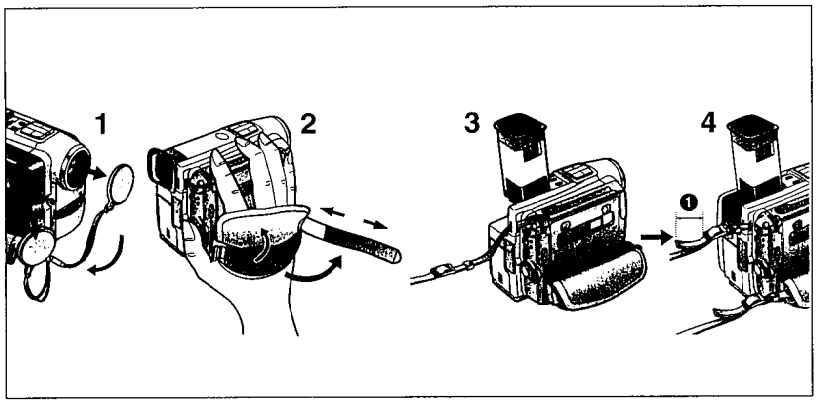
Using the Finder

Before using the Finder, adjust it to your eyesight so that the indications in the Finder are clear and easy to read.

1 Set the [POWER ON/OFF] Switch to [ON].

2 Slide the Finder backward.
The angle of the Finder can be adjusted upward. However, be sure to slide the Finder backward until it stops, before turning it upward.

3 Adjust by turning the Eyepiece Corrector Dial ❶.
You can adjust the brightness of the Finder on the [MENU (OTHERS)] Menu. (➔ 118-122, 130)



Handling the Lens Cap

Before you start recording, remove the Lens Cap.

1 You can hook the removed Lens Cap onto the Grip Belt.
When not actually recording, attach the Lens Cap to the Lens to protect it.

Adjusting the Grip Belt

You can adjust the Grip Belt to the size of your hand.

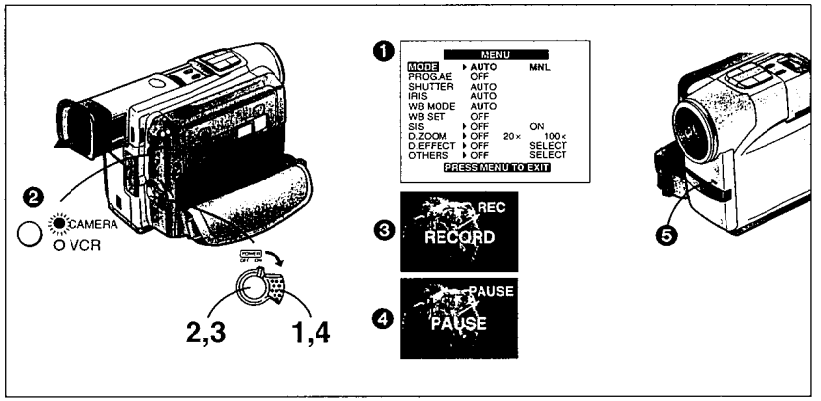
2 Open the Grip Belt Cover and adjust the length of the Grip Belt.

Attaching the Shoulder Strap

Before you go recording outside, we recommend that you attach the Shoulder Strap to prevent the Movie Camera from dropping accidentally.

3 Pull the end of the Shoulder Strap through the Shoulder Strap Holders on the Movie Camera.

4 Fold the end of the Shoulder Strap back and pull it through the Shoulder Strap Length Adjuster.
Pull it out more than 2 cm ❶ from the Shoulder Strap Length Adjuster so that it cannot slip off.



Recording

When [MODE] on the Menu has been set to [AUTO] ❶ (➔ 118, 120), you can simply turn on the Movie Camera and press the Start/Stop Button to start recording, and the focus and white balance are adjusted automatically.

- Depending on the light source and recording situation, correct automatic focusing and white balance adjustment may not be possible. In such cases, adjust them manually.
  (Focus: ➔ 34) (White Balance: ➔ 80, 82)

1 Set the [POWER ON/OFF] Switch to [ON].
The [CAMERA] Lamp lights. ❷

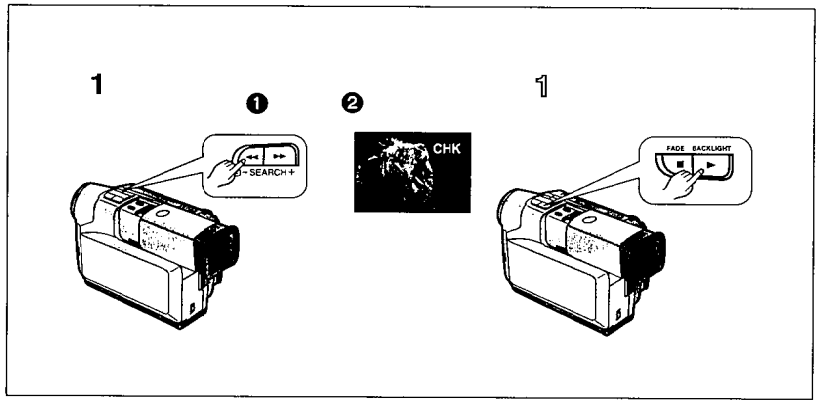
2 Press the Start/Stop Button.
Recording starts.
The [RECORD] Indication appears briefly and then changes to [REC]. ❸

3 To pause recording:
Press the Start/Stop Button again.
The [PAUSE] Indication appears. ❹

4 To finish recording:
Set the [POWER ON/OFF] Switch to [OFF].

- **If you leave the Movie Camera in the Recording Pause Mode for more than 6 minutes, it automatically switches off to protect the tape and to conserve battery power. To resume recording from this condition, set the [POWER ON/OFF] Switch to [OFF] and then to [ON] again.**

Recording Lamp
The Recording Lamp lights ❺ during recording to indicate that recording is being performed.
If you select [OTHERS] on the Menu and then set [REC LAMP] to [OFF], the Recording Lamp does not light. (➔ 118-122)



Checking If the Picture Is Recorded
(Recording Check)

To play back the final few seconds of the last recorded scene in the Recording Pause Mode.

1 Press the Reverse Search Button [◀◀] ❶ briefly in the Recording Pause Mode.

The [CHK] Indication appears ❷.
After checking, the Movie Camera returns to the Recording Pause Mode.

♦ For Recording Check, the Movie Camera must be in the same mode (SP or LP) as used for recording, otherwise the playback picture is distorted.

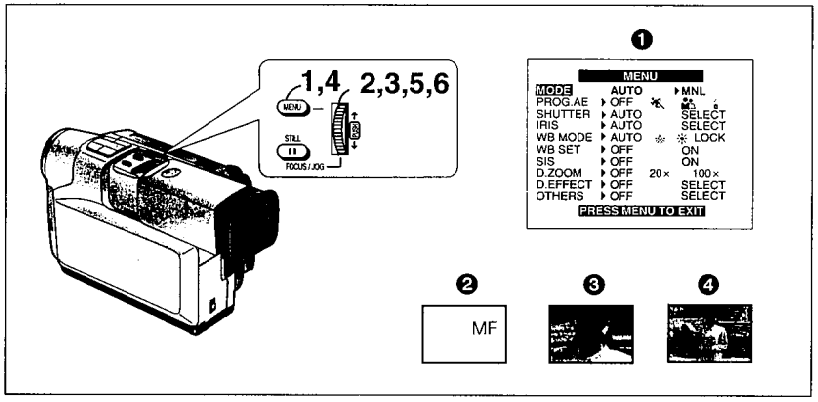
Recording Backlit Scenes
(Backlight Compensation)

To prevent the backlit subject from being recorded very dark.
(Backlight means that the light falls on the subject from behind, i.e. the subject is between the light source and the Movie Camera.)

1 Keep the Backlight Button [▶] pressed.

The backlight is being compensated as long as you keep the Button pressed, and the subject is recorded more brightly.
(The picture brightens up as a whole.)

Returning to Normal Recording
Release the Backlight Button [▶].



Manually Focusing on the Subject
(Manual Focus)

To adjust the focus manually for subjects and recording situations for which automatic focusing is not precise.

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select [MODE].

3 Press the [PUSH] Dial to select [MNL] ❶.

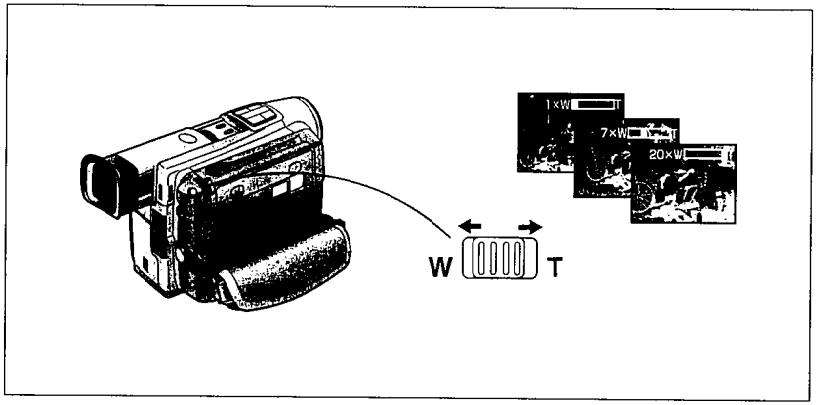
4 Press the [MENU] Button to exit the Menu.

5 Keep the [PUSH] Dial pressed until the [MF] Indication ❷ appears.

6 Turn the [PUSH] Dial until the subject is sharp.

Changing Back to Automatic Focusing
Keep the [PUSH] Dial pressed until the [MF] Indication disappears.

Hint for Manual Focus Adjustment
♦ If you adjust the focus in the wide-angle setting, the subject may go out of focus when you enlarge it. Therefore, enlarge the subject ❸ before you adjust the focus, so that the picture remains focused when you zoom out ❹.



Enlarging Your Subject or Widening the Recording Angle
(Zooming In/Out)

Recording close-ups of your subjects and recording wide-angle shots adds special effects to your videos.

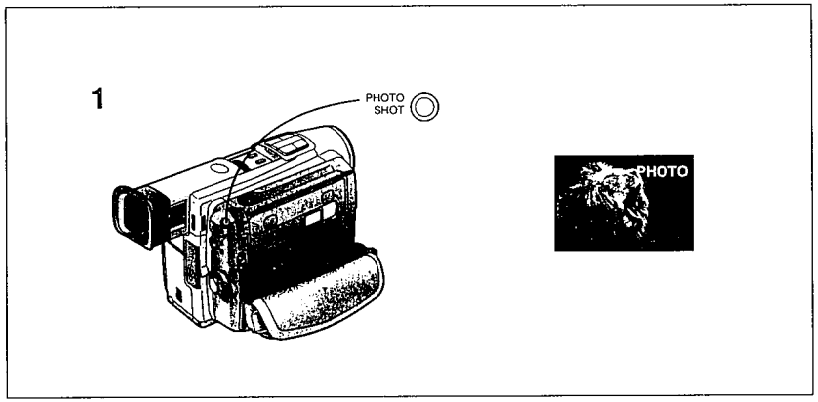
1 To record a wider view (Zooming-out): Push the [W/T] Zoom Lever toward [W]. To enlarge your subject (Zooming-in): Push the [W/T] Zoom Lever toward [T].
- The Zoom Magnification Indication appears for a few seconds.
- The farther you push the [W/T] Zoom Lever toward [W] or [T], the faster the zooming speed becomes.

♦ During recording, the zooming speed is slower than during recording pause.

Enlarging Your Subjects Even More (Digital Zooming)
Selecting one of the two settings for [D.ZOOM] on the Menu makes it possible to further enlarge the subject. (➔ 118, 120)
- **20×**: Digital zooming up to 20×.
- **100×**: Digital zooming up to 100×.
- Up to 10×, the zooming is done optically.

♦ The higher the Digital Zoom Magnification is, the lower is the picture quality.
♦ If you set [D.ZOOM] on the Menu to [20×] or [100×], the [D.ZOOM] Indication appears.

Recording Extra Close-up Shots of Small Subjects (Macro Close-up Function)
When the zoom magnification is 1×, the Movie Camera can focus on subjects down to a distance of approximately 25 mm between lens and subject. This allows recording very small subjects such as insects.
- When you have zoomed to the tele setting, precise focussing is only possible on subjects no closer than 1.2 metres.



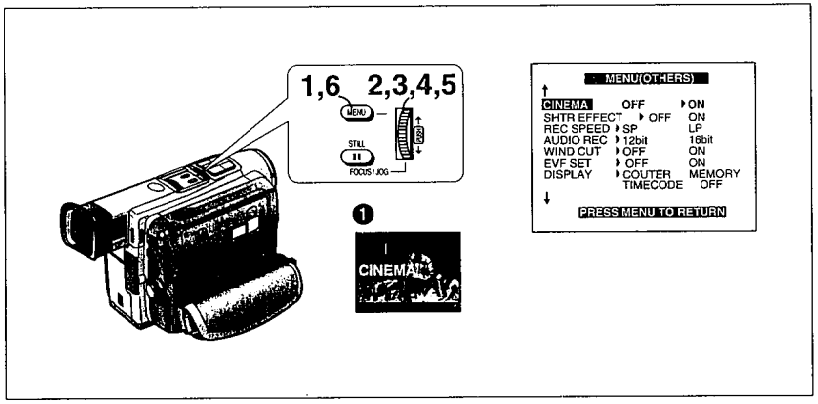
Using the Movie Camera as a Digital Still Camera (Photoshot)

With this function, you can record still pictures with sound for approximately 7 seconds each.
This function is convenient for example for pictures that you want to print on a Video Printer.

1 Press the [PHOTO SHOT] Button. (This function can be used during recording, too.)

The Movie Camera records a still picture for approximately 7 seconds and then switches over to the Recording Pause Mode.

- The image in the Finder also stands still.
  If you select [OTHERS] on the Menu and set [SHTR EFFECT] to [ON], the screen blinks briefly when you press the [PHOTO SHOT] Button.
- With the still pictures that you have recorded in the Photoshot Mode, you can do the following.
  - Index search (➔ 60)
    (However, searching for the picture(s) recorded at the beginning of the tape may not be possible.)
  - Automatic printing (➔ 112)
- ♦ If you select [OTHERS] on the Menu and set [SHTR EFFECT] to [ON], the visual shutter effect and the click sound are also recorded. (There is a slight delay between pressing the [PHOTO SHOT] Button and the actual start of recording. The visual shutter effect may occur with slight delay after recording of the still picture has started.)
- ♦ The picture quality deteriorates slightly.
- ♦ Using the Photoshot Function makes the Remaining Tape Time Indication disappear. Resuming normal recording makes the Remaining Tape Time Indication appear again.



Recording in the Cinema Mode (Cinema Mode)

This mode lets you record in the cinema-like wide-screen format.

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select [OTHERS].

3 Press the [PUSH] Dial to select [SELECT].
The [MENU (OTHERS)] Menu appears.

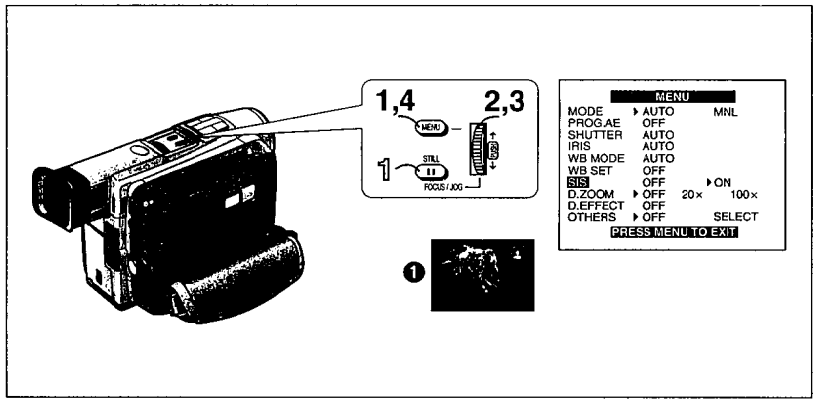
4 Turn the [PUSH] Dial to select [CINEMA].

5 Press the [PUSH] Dial to select [ON].

6 Press the [MENU] Button twice to exit the Menu.

- ♦ In the Cinema Mode, black bars appear at the top and bottom of the Finder screen. ❶

Cancelling the Cinema Mode
Set [CINEMA] on the [MENU (OTHERS)] Menu to [OFF].



Recording with Minimised Camera Shake (Super Image Stabilizer)

In recording situations where shaking of the Movie Camera is likely to happen, for example when you have zoomed in on a distant subject or when you record while walking, you can use this function to stabilize the image.

- ♦ In case of very strong camera shake, it may not be possible to stabilize the picture.

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select [SIS].

3 Press the [PUSH] Dial to select [ON].

4 Press the [MENU] Button to exit the Menu.
The [ ] Indication ❶ appears.

- ♦ In a dimly lit place, the Super Image Stabilizer Function may not work. In this case, the [ ] Indication flashes.
- ♦ Under fluorescent lamps, the picture brightness may fluctuate and the colours may be unnatural.
- ♦ The picture quality may deteriorate slightly.
- When you use a tripod, we recommend that you set [SIS] to [OFF].

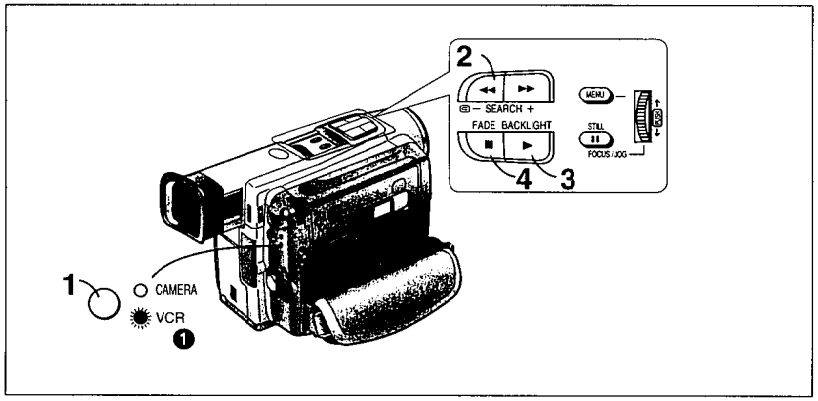
Cancelling the Super Image Stabilizer Function
Set [SIS] on the Menu to [OFF].

Recording Still Pictures

You can record still pictures of any desired length together with sound either in the middle of a normal recording or from the Recording Pause Mode.

1 Press the Still Button[❚❚].

Cancelling the Still Picture Recording Mode
Press the Still Button [❚❚] again.



Viewing the Just Recorded Scenes on the Movie Camera (Playback)

You can play back recorded scenes right after recording.

1 Press the [VCR/CAMERA] Button so that the [VCR] Lamp ❶ lights.

2 Press the Rewind Button [◀◀] to rewind the tape.

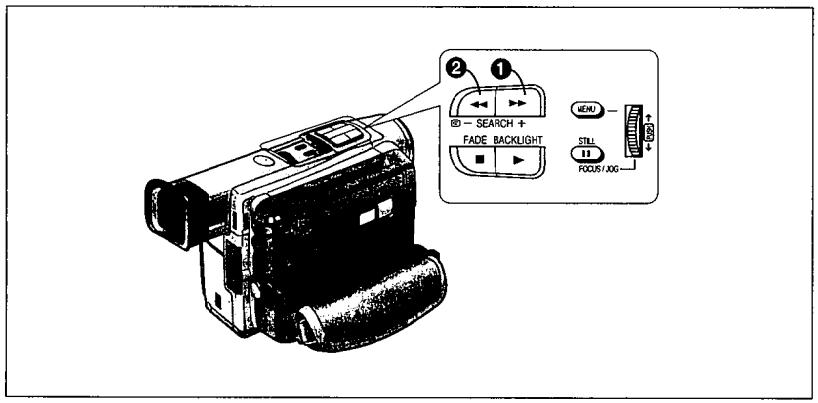
- Rewind the tape to the point where the recording started.
- If the tape reaches the beginning, rewinding automatically stops.

3 Press the Play Button [▶] to start playback.

4 To stop playback: Press the Stop Button [■].

Making the Date/Time Indication Appear

This Movie Camera automatically records the date and time as part of the sub code (➔ 144).
To make the Date/Time Indication appear, set [DATE/TIME] on the Menu to the desired setting.



Searching for a Scene You Want to Play Back

Cue Playback

Keep the Cue Button [▶▶] ❶ pressed during playback.

Review Playback

Keep the Review Button [◀◀] ❷ pressed during playback.

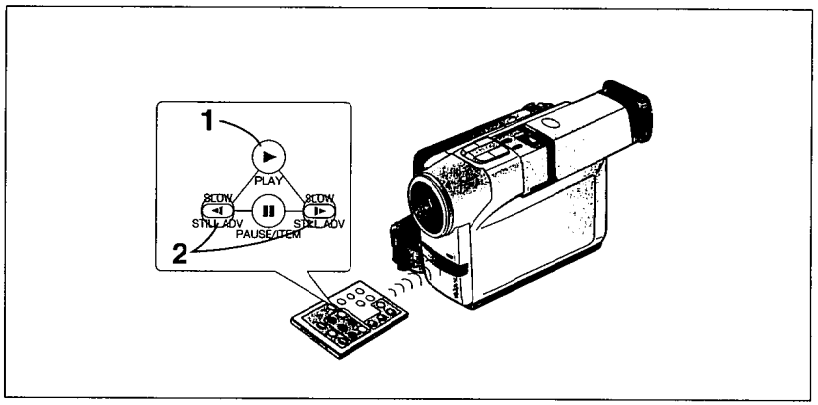
Search Lock Function

For longer Cue or Review Playback, press the Cue Button [▶▶] or Review Button [◀◀] only briefly. As this locks the search function, you do not need to keep the button pressed for a long time.

- To resume normal playback, press the Play Button [▶].
- In Cue and Review Playback, pictures with fast-moving subjects may contain mosaic-like patterns.

Hyper Check Function

- If you press the Fast-forward Button [▶▶] during fast-forwarding of the tape or the Rewind Button [◀◀] during rewinding of the tape, Cue Playback or Review Playback continues for as long as you keep the Button pressed.
- ♦ Before and after activating Cue Playback or Review Playback, the picture may momentarily be distorted.



Playing Back in Slow Motion

(Slow Motion Playback)

1 Press the Play Button [▶].

2 Press the Slow Motion/Still Advance Button [◂I] or [I▸] on the Remote Controller.

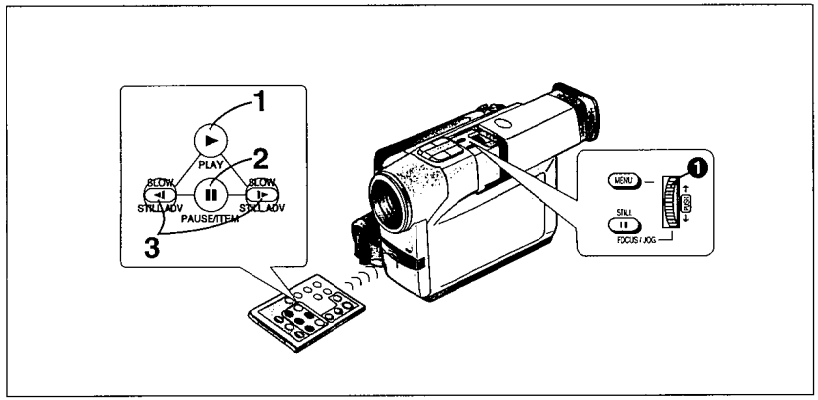
Pressing the [◂I] Button starts slow motion playback in reverse direction, and pressing the [I▸] Button starts slow motion playback in forward direction.

Scenes recorded in the SP Mode are played back at approximately 1/5th of the normal speed.
Scenes recorded in the LP Mode are played back at approximately 1/3rd of the normal speed.

Resuming Normal Playback

Press the Play Button [▶].
Playback continues with normal speed.

- During slow motion playback in reverse direction, the Time Code Indication may not be accurate.



Playing Back Still Pictures and Advancing Them One by One

(Still Playback/Still Advance Playback)

You can freeze the action during playback and advance the still pictures one by one.

1 Press the Play Button [▶].

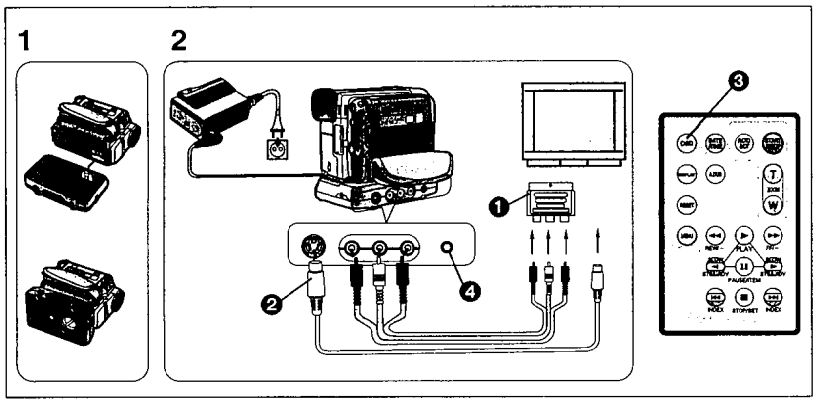
2 Press the Pause Button [❚❚].
The playback picture stops in the Still Playback Mode.

3 Press the Slow Motion/Still Advance Button [◂❙] or [❙▸] on the Remote Controller.
Pressing the [◂❙] Button advances the still picture frame by frame in reverse direction. Pressing the [❙▸] Button advances the still picture frame by frame in forward direction.

Resuming Normal Playback
Press the Play Button [▶].
Playback continues with normal speed.

- If you keep the [❙▸] Button on the Remote Controller pressed for more than 1 second during Still Advance Playback, the Movie Camera switches over to the Slow Motion Playback Mode with slower speed than in the normal Slow Motion Playback Mode.
- If you leave the Movie Camera in the Still Playback Mode for more than 6 minutes, it switches over to the Stop Mode to protect the video heads against excessive wear.
- During Still Advance Playback, the Time Code Indication may not be accurate.

Using the Jog Dial (Jog Playback)
By turning the Jog Dial ([PUSH] Dial) ❶ on the Movie Camera in the Still Playback Mode, you can advance the still pictures one by one in forward or reverse direction.



Playing Back on a TV

(With the Output Terminal Box [AV ONE TOUCH STATION] Attached)

Attaching the Output Terminal Box [AV ONE TOUCH STATION] to the Movie Camera makes it possible to playback recorded scenes on a TV.

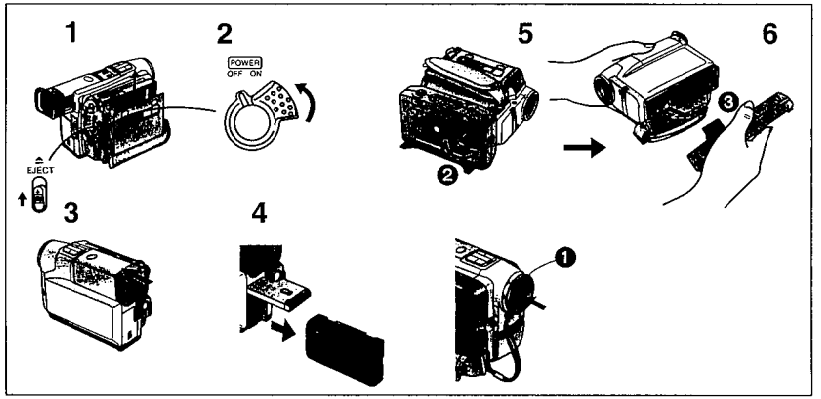
1 Attach the Output Terminal Box [AV ONE TOUCH STATION]. (➜ 102)

2 Connect the Video and Audio Output Sockets to the Video and Audio Input Sockets on the TV.
Use the AV Cable and 21-pin Acaptor ❶ to connect to the TV. If your TV is equipped with an S-Video Socket, also connect the S-Video Cable ❷.

- Before connecting, turn off both the Movie Camera and the TV.
- If a cassette recorded with copyright protection signal is played back, the screen becomes black. However, scenes recorded with this Movie Camera do not contain a copyright protection signal.

Making the Indications Appear on the TV Screen
Press the [OSD] Button ❸ on the Remote Controller. The On-Screen Indications also appear on the TV screen.

Playing Back the Sound via Headphones
Using the [PHONE] Socket ❹ on the Output Terminal Box [AV ONE TOUCH STATION] lets you listen to the playback sound via headphones.



After Use

1 Take out the cassette. (➜ 22)

2 Set the [POWER ON/OFF] Switch to [OFF].

3 Retract the Finder.

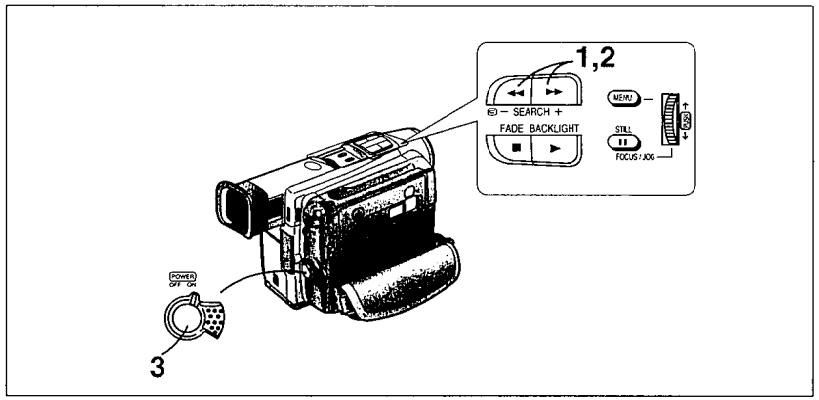
4 Take out the Battery. (➜ 18)

Attaching the Lens Cap ❶
After use, attach the supplied Lens Cap to the Lens to protect it.

Removing the Output Terminal Box [AV ONE TOUCH STATION]
If the Output Terminal Box [AV ONE TOUCH STATION] is attached to the Movie Camera, remove it in the following way:

5 Turn the Locking Handle in the direction of the arrow ❷.

6 Pull off the Output Terminal Box [AV ONE TOUCH STATION] in the direction of the arrow ❸.



Viewing Recorded Scenes During Recording Pause
(Camera Search)

You can view recorded scenes when the Movie Camera is in the Recording Pause Mode.
The Camera Search Function is convenient to search for a scene from which you want to start recording a new scene with smooth scene-to-scene transition.

1 Keep the Reverse Search Button [◀◀] or the Forward Search Button [▶▶] pressed for more than 1 second.
Pressing the [◀◀] Button plays back the picture in reverse direction.
Pressing the [▶▶] Button plays back the picture in forward direction.

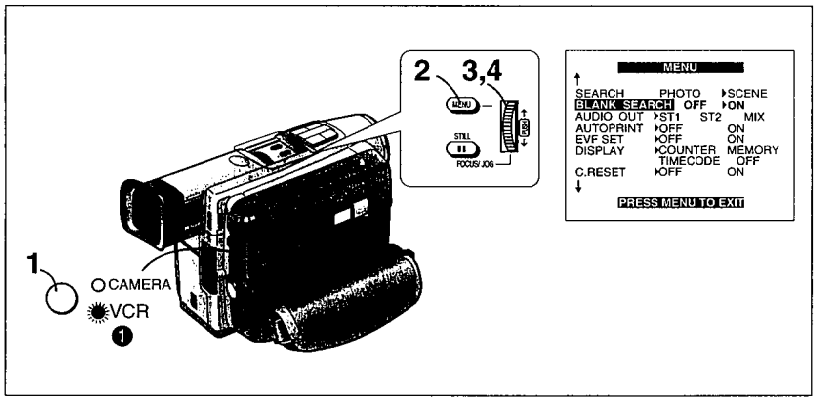
Starting to Record from the Desired Position

2 Release the pressed Search Button.
The Movie Camera is in the Recording Pause Mode.

3 Press the Start/Stop Button to start recording.
The Movie Camera starts recording a new scene with smooth scene-to-scene transition.

- In the Camera Search Mode, the picture may contain mosaic-like patterns. However, this is a phenomenon particular to digital video and completely normal.

♦ If the Recording Speed Mode (SP/LP) of the previous and the new recording are different, the playback picture may be distorted.



Searching for the End of the Recorded Part on a Cassette
(Blank Search)

With the Blank Search Function you can quickly locate the end of the recorded part on a cassette (or a blank part between recordings).

1 Press the [VCR/CAMERA] Button so that the [VCR] Lamp lights. ❶

2 Press the [MENU] Button.
The Menu appears.

3 Turn the [PUSH] Dial to select [BLANK SEARCH].

4 Press the [PUSH] Dial to select [ON].
Approximately 1 second before the end of the last recorded scene, the Movie Camera switches over to the Still Playback Mode.

- If there is no blank part on a cassette, the Movie Camera stops at the end of the tape.
- When the Blank Search has finished, you can press the [VCR/CAMERA] Button so that the [CAMERA] lamp Lights, and then start recording. The new scene is recorded with a smooth transition from the last to the new scene.

Searching for the Beginning of Recorded Scenes Marked with Index Signal
(Index Search)

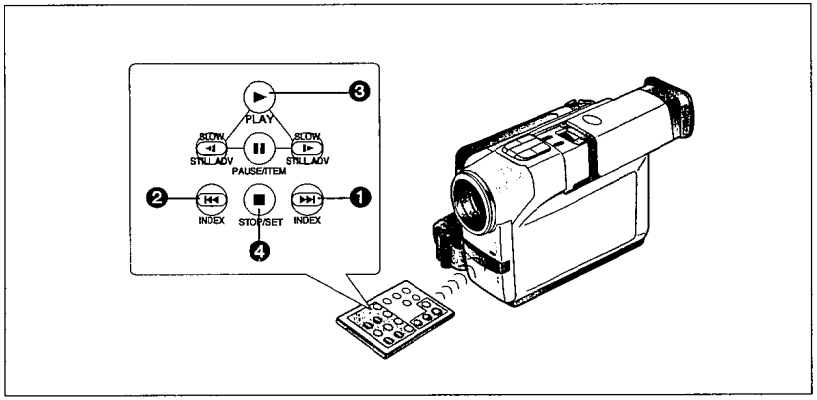
Index Search
To allow easy searching for desired scenes, this Movie Camera automatically records index signals during recording as follows:

❶ Photoshot Index Signal
To search for still piclures recorded in the Photoshot Mode (→ 38) and to use for automatic printing (→ 112).
A photoshot index signal is automatically recorded every time you record a still picture in the Photoshot Mode.

❷ Scene Index Signal
To search for the beginning of recorded scenes.
A scene index signal is automatically recorded in the following cases:
- When you start recording after inserting a cassette.
- Depending on the setting of [SCENEINDEX] on the [MENU (OTHERS)] Menu (→113-122):

[2HOUR]: An index signal is recorded when recording is restarted after a lapse of more than 2 hours.
[DAY]: An index signal is recorded when recording is restarted after the date has changed since the last recording.

(While an index signal is being recorded, the [INDEX] Indication flashes for a few seconds.)



Searching for the Beginning of Photoshot Pictures Recorded in the Photoshot Mode (Photoshot Index Search)

- Press the [VCR/CAMERA] Button on the Movie Camera so that the [VCR] Lamp lights.
- Set [SEARCH] on the Menu to [PHOTO]. (➔ 118, 124) (The initial setting is [PHOTO].)

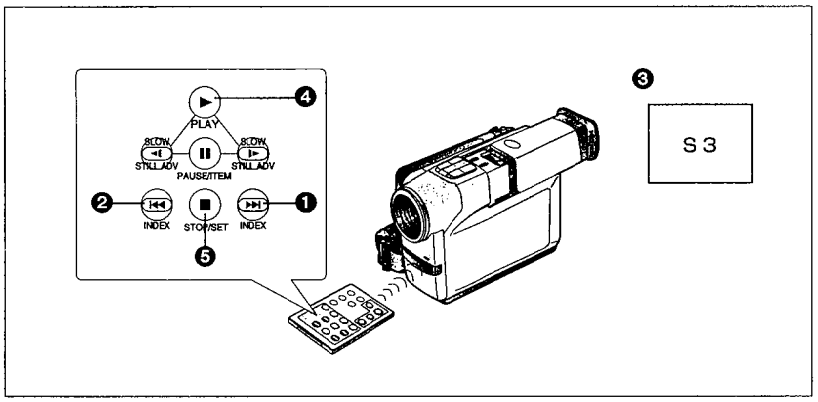
Photoshot Index Search in Forward Direction
Press the Index Button [▶▶I] ❶ on the Remote Controller.

Photoshot Index Search in Reverse Direction
Press the Index Button [I◀◀] ❷ on the Remote Controller.

- At every press of the corresponding button, the tape is fast-forwarded or rewound to the next still picture recorded in the Photoshot Mode.
  After reaching the next still picture, the still picture is played back continually together with the sound (only for approximately 4 seconds). (If you leave the Movie Camera in the Still Playback Mode for more than 6 minutes, it switches over to the Stop Mode to protect the video heads against excessive wear).

♦ The Photoshot Index Search may not work correctly for still pictures recorded near the beginning of the tape.

- If you keep the [I◀◀] or [▶▶I] Button pressed for more than 2 seconds, the Intro Search Function is activated and it plays back all still pictures recorded in the Photoshot Mode on the cassette one after another for a few seconds each.
  (To cancel the Intro Search Function, press the Play Button [▶] ❸ or the Stop Button [■] ❹.)



Searching for the Beginning of Recorded Scenes (Scene Index Search)

- Press the [VCR/CAMERA] Button on the Movie Camera so that the [VCR] Lamp lights.
- Set [SEARCH] on the Menu to [SCENE]. (➔ 118, 124)

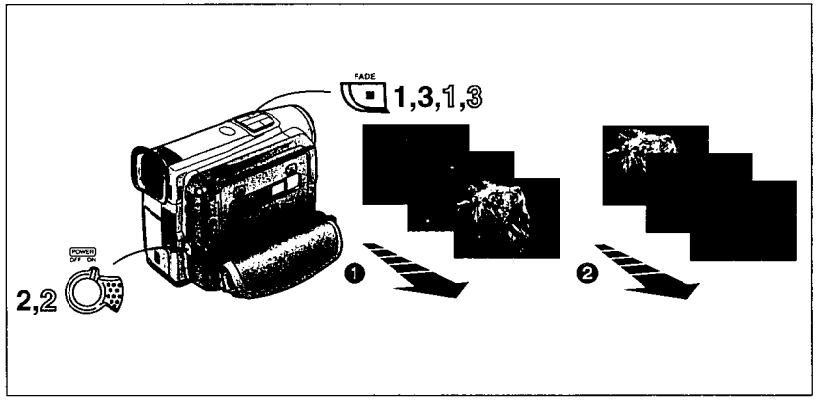
Scene Index Search in Forward Direction
Press the Index Button [▶▶I] ❶ on the Remote Controller.

Scene Index Search in Reverse Direction
Press the Index Button [I◀◀] ❷ on the Remote Controller.

- When you briefly press the corresponding button once, the [S1] Indication appears and the search for the next scene marked with an index signal starts. After the Scene Index Search has started, every time you press the button, the indication changes successively from [S2] to [S9], and the beginning of the scene corresponding to the selected number is located. ❸ After reaching the desired scene, playback starts automatically. (At a time, Scene Index Search in forward or reverse direction is possible up to the ninth scene marked with index signal from the present tape position.)

♦ If the distance between two scene index signals is less than 1 minute, the Scene Index Search may not work correctly.
♦ The Scene Index Search may not work correctly for scenes recorded near the beginning of the tape.

- If you keep the [I◀◀] or [▶▶I] Button pressed for more than 2 seconds, the Intro Search Function is activated and it plays back the beginning of all scenes marked with an index signal on the cassette one after another for a few seconds each.
  (To cancel the Intro Search Function, press the Play Button [▶] ❹ or the Stop Button [■] ❺.)



Fading In/Out

Fading In ❶
Fading-in lets you make the picture and sound appear gradually from a black screen at the beginning of a scene.

1 With the Movie Camera in the Recording Pause Mode, keep the Fade Button [■] pressed.
The picture gradually disappears.

2 When the picture has completely disappeared, press the Start/Stop Button to start recording.

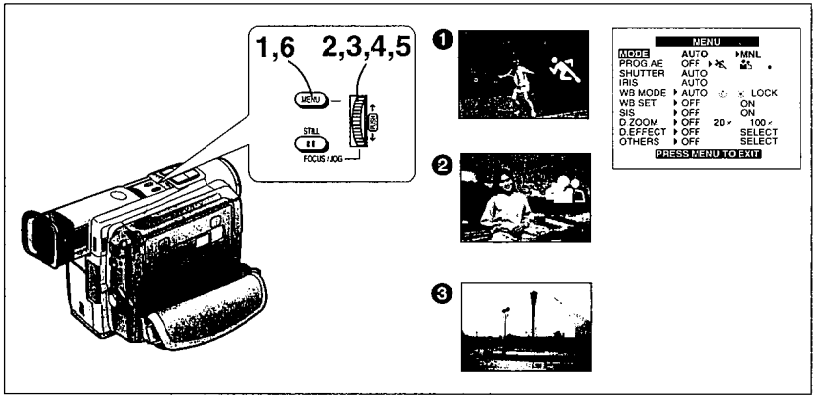
3 Approximately 3 seconds after the recording has started, release the Fade Button [■].
The picture gradually appears again.

Fading Out ❷
Fading-out lets you make the picture and sound disappear gradually into a black screen at the end of a scene.

1 During recording, keep the Fade Button [■] pressed.
The picture gradually disappears.

2 After the picture has completely disappeared, press the Start/Stop Button to stop recording.
The Movie Camera is in the Recording Pause Mode.

3 Release the Fade Button [■].



Recording in Various Situations
(Programme AE)

This function lets you select Automatic Exposure settings optimized for special recording situation.

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select [MODE].

3 Press the [PUSH] Dial to select [MNL].

4 Turn the [PUSH] Dial to select [PROG.AE].

5 Press the [PUSH] Dial to select the desired mode ([ ], [ ] or [ ]).
This makes it impossible to set [SHUTTER] and [IRIS] on the Menu to [SELECT].

6 Press the [MENU] Button to exit the Menu.
The indication of the selected mode appears.

[ ] Sports Mode ❶
To record scenes with fast-moving subjects such as sports scenes.

[ ] Portrait Mode ❷
To make subjects stand out sharply from the background.

[ ] Low Light Mode ❸
To record dark scenes more brightly.

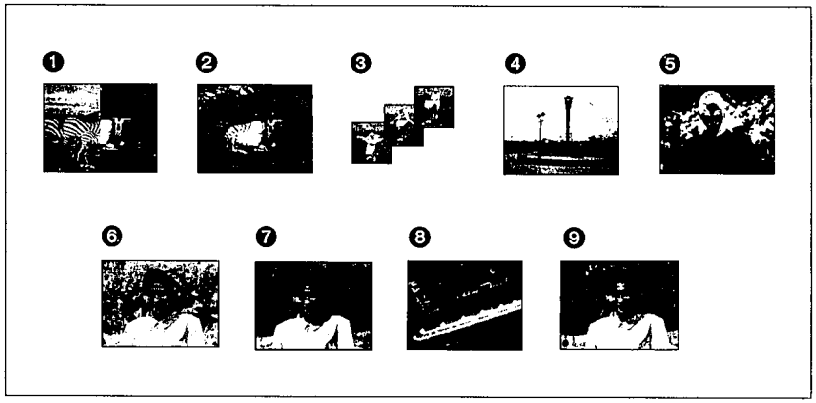
Cancelling the Programme AE Function
Set [PROG.AE] on the Menu to [OFF].

Sports Mode
- When playing back scenes recorded in the Sports Mode, you can enjoy slow motion and still playback of very sharp images with fine details.
- Avoid recording under fluorescent, mercury-vapour or natrium lamps in this mode as the colour and the brightness of the playback picture might fluctuate.
- When recording subjects lit by strong lights or with much light reflection, the playback picture may contain vertical streaks of light.
- When the scene is not sufficiently lit, the [ ] Indication flashes.
- When using this mode for recording indoors, the playback picture may flicker.
- It is not possible to select the Sports Mode [ ] together with the Gain-up Mode [GAINUP] on the [MENU (D.EFFECT)] Menu.

Portrait Mode
- When using this mode for recording indoors, the playback picture may flicker.
- It is not possible to select the Portrait Mode [ ] together with the Gain-up Mode [GAINUP] on the [MENU (D.EFFECT)] Menu.

Low Light Mode
- It may not be possible to sufficiently brighten up extremely dark scenes.

- If you have adjusted the shutter speed (➔ 84) or the iris (➔ 86), it is not possible to select a Programme AE Mode ([ ], [ ] or [ ])



Recording with Special Effects
(Digital Effects)

There are 9 different modes available for adding special digital picture effects.

❶ **Wipe Mode [WIPE]**
It gradually replaces a picture of the last recorded scene with the picture of the new scene, like drawing a curtain. For details, (➔ 76).

❷ **Mix Mode [MIX]**
It gradually fades out the picture of the last recorded scene while fading in the picture of the new scene. For details, (➔ 78).

❸ **Strobe Mode [STROBE]**
It records the pictures with a strobescope-like effect.

❹ **Gain-up Mode [GAINUP]**
It electronically brightens up the picture.
- In this mode, adjust the focus manually.
- Some After-image distortion may occur during recoding with the Gain-up Function.

❺ **Negative/Positive Mode [NEGA]**
The recorded pictures have reversed colours similar to photographic negatives.

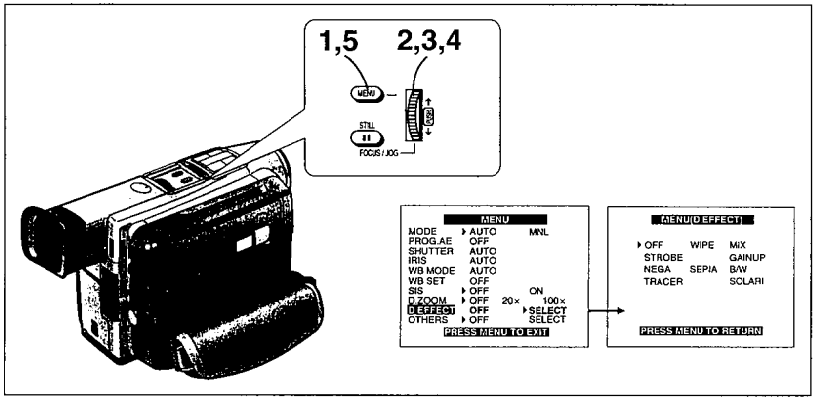
❻ **Sepia Mode [SEPIA]**
Scenes are recorded with a brown tint similar to the colour of old photographs.

❼ **Monotone Mode [B/W]**
The picture is recorded in black and white.

❽ **Trailing Effect Mode [TRACER]**
The picture is recorded with a trailing effect.

❾ **Solarisation Mode [SOLARI]**
The picture is recorded with reversed colours.

- The Digital Effects cannot be used when the Super Image Stabilizer Function or the Digital Zoom Function is activated.
When you want to use a digital effect, be sure to set both [D.ZOOM] and [SIS] on the Menu to [OFF].



Recording with Special Effects
(Digital Effects) (Continued)

Selecting the Desired Digital Effect

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select [D.EFFECT].
- **Set [D.ZOOM] and [SIS] on the Menu to [OFF], otherwise you cannot select a Digital Effect.**

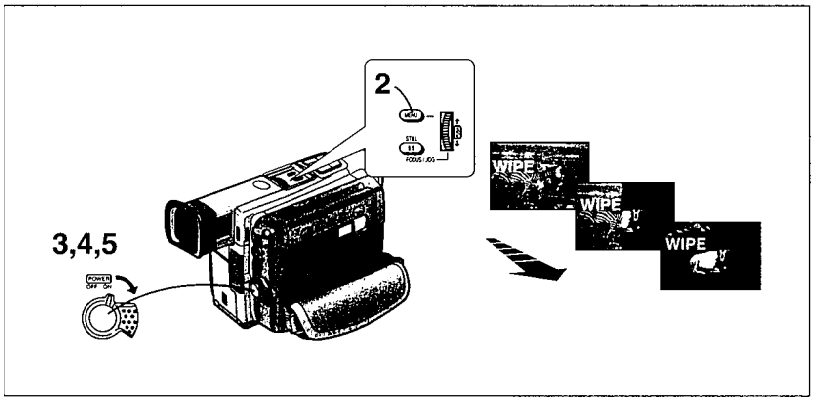
3 Press the [PUSH] Dial to select [SELECT].
The [MENU (D.EFFECT)] Menu appears.

4 Press the [PUSH] Dial to select the desired digital effect.

5 Press the [MENU] Button twice to exit the Menu.
- The picture has the selected digital effect now. However, the effect of the Wipe Function and the Mix Function only become visible when actually recording in the respective mode. (➔ 76, 78)

- If you select [GAINUP] on the [MENU (D.EFFECT)] Menu after adjusting the shutter speed manually or if you select either [ ] or [ ] for [PROG.AE], the selected shutter speed or the Programme AE Mode is cancelled.

Cancelling the Digital Effect
Set [D.EFFECT] on the Menu to [OFF].



Recording with Special Effects
(Digital Effects) (Continued)

■ Wipe Mode
It gradually replaces a still picture of the last recorded scene with the moving picture of the new scene, like drawing a curtain.

After performing steps 1-3 on page 74:

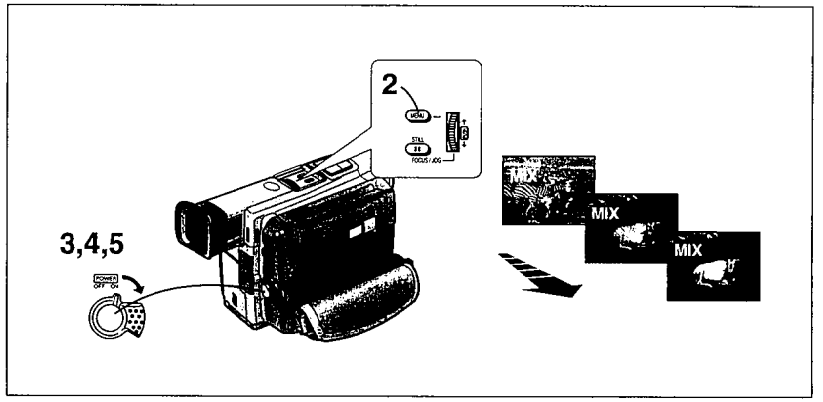
1 Select [WIPE] on the [MENU (D.EFFECT)] Menu. (➔ 74)

2 Press the [MENU] Button twice to exit the Menu.
The [WIPE] Indication appears.

3 Press the Start/Stop Button to start recording.
The normal recording starts.

4 Press the Start/Stop Button to pause recording.
The last picture is stored in memory.

5 Press the Start/Stop Button to start recording again.
The last picture of the previous scene is gradually replaced by the new scene.



Recording with Special Effects
(Digital Effects) (Continued)

■ Mix Mode
It gradually fades out a still picture of the last recorded scene while fading in the moving picture of the new scene.

After performing steps 1-3 on page 74:

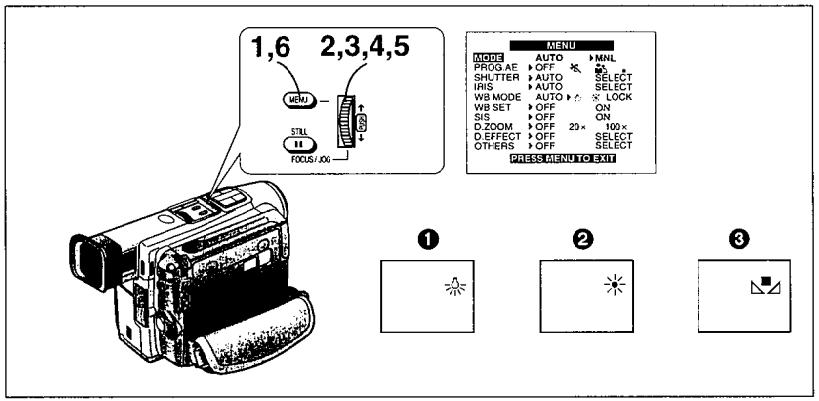
1 Select [MIX] on the [MENU (D.EFFECT)] Menu. (➔ 74)

2 Press the [MENU] Button twice to exit the Menu.
The [MIX] Indication appears.

3 Press the Start/Stop Button to start recording.
The normal recording starts.

4 Press the Start/Stop Button to pause recording.
The last picture is stored in memory.

5 Press the Start/Stop Button to start recording again.
The last picture gradually fades out while the new scene fades in.



Recording with Natural Colours
(White Balance)

This Movie Camera automatically adjusts the white balance to ensure that the pictures are recorded with natural colours. For certain types of subjects and lighting conditions, however, this Auto White Balance Adjustment Mode may not be able to ensure natural colours (➔ 150, 152). In these cases, adjust the white balance manually.

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select [MODE].

3 Press the [PUSH] Dial to select [MNL].

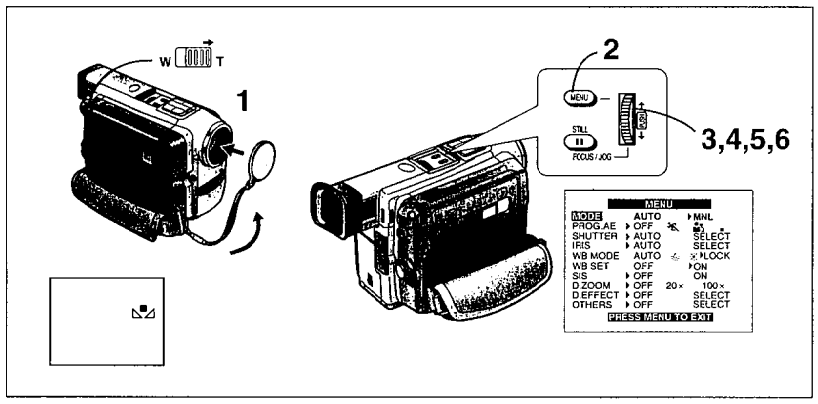
4 Turn the [PUSH] Dial to select [WB MODE].

5 Press the [PUSH] Dial to select the desired mode.
The following White Balance Mode settings are possible:
❶ Indoor (Incandescent Lamp) Mode (☼)
❷ Outdoor Mode (☀)
❸ Lock Mode (▣)
If you set [WB MODE] on the Menu to [LOCK], it is necessary to set [WB SET] on the Menu to [ON] and adjust the white balance manually. (➔ 82)

6 Press the [MENU] Button to exit the Menu.

♦ If you select [GAINUP], [SEPIA] or [B/W] on the [MENU (D.EFFECT)] Menu, you cannot select or change the White Balance Mode.

Returning to the Auto White Balance Mode
Set [WB MODE] on the Menu to [AUTO].



Adjusting the White Balance Manually

Use the Manual White Balance Adjustment Mode for all types of lighting outside the range ❶ (➔ 152), as the Auto White Balance Adjustment Mode can only ensure natural colours for the types of lighting within that range. For optimum results under almost any types of lighting, we recommend that you adjust the white balance manually for each new scene.

1 Attach the Lens Cap and zoom in until the entire screen becomes white.

2 Press the [MENU] Button.
The Menu appears.

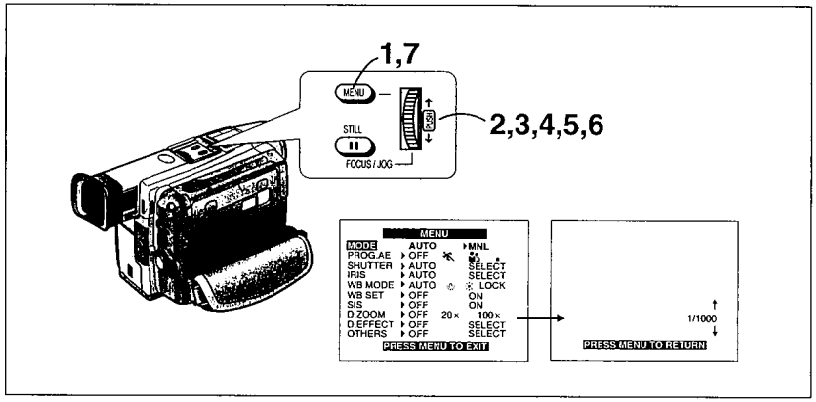
3 Turn the [PUSH] Dial to select [MODE].

4 Press the [PUSH] Dial to select [MNL].

5 Turn the [PUSH] Dial to select [WB SET].

6 Aim the Movie Camera at the subject and press the [PUSH] Dial to select [ON].
- When the [▣] Indication stops flashing and remains lit, the Manual White Balance Adjustment is finished. If you want to use this setting again later on, for example after having used Automatic White Balance Adjustment, you can recall it by setting [WB MODE] to [LOCK] on the Menu. (In this case, the [▣] Indication flashes.)
- ♦ When the [▣] Indication remains flashing under weak illumination, the Manual White Balance Adjustment can not be set manually.

Returning to the Auto White Balance Adjustment Mode
Set [WB MODE] on the Menu to [AUTO].



Adjusting the Shutter Speed Manually

To achieve special creative effects or to cope with special lighting situations or fast-action scenes, you can adjust the shutter manually.

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select [MODE].

3 Press the [PUSH] Dial to select [MNL].

4 Turn the [PUSH] Dial to select [SHUTTER].
If you set [PROG.AE] to any setting other than [OFF], you cannot select [SHUTTER].

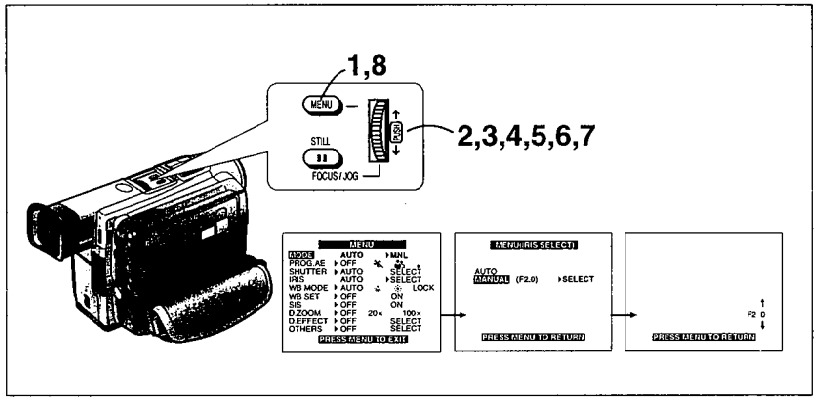
5 Press the [PUSH] Dial to select [SELECT].

6 Turn the [PUSH] Dial to adjust the shutter speed.

7 Press the [MENU] Button twice to exit the Menu.
The indication of the selected shutter speed appears.

Range of Shutter Speed Adjustment
1/50–1/8000 s
The standard shutter speed is 1/50 s.
The nearer to [1/8000] a setting you select, the faster the shutter speed becomes.

Returning to the Normal Shutter Speed
Set [MODE] on the Menu to [AUTO].



Adjusting the Iris (F Number) Manually

To achieve special creative effects or to cope with special lighting situations or fast-action scenes, you can adjust the iris (F number) manually.

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select [MODE].

3 Press the [PUSH] Dial to select [MNL].

4 Turn the [PUSH] Dial to select [IRIS].

5 Press the [PUSH] Dial to select [SELECT].
The Manual Iris Adjustment screen [MANUAL (IRIS SELECT)] appears.

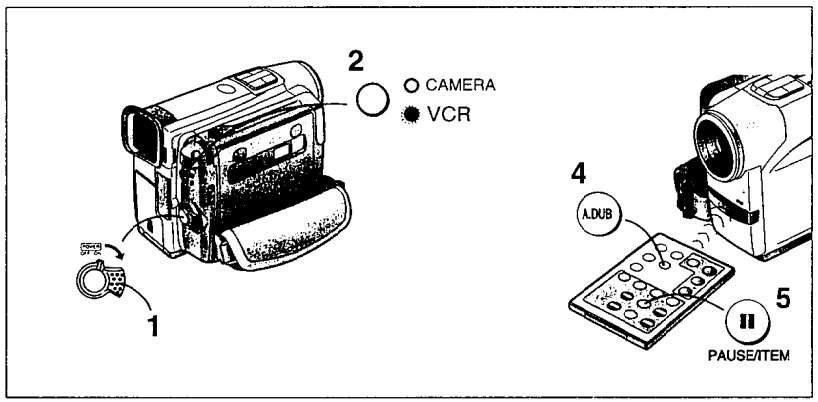
6 Turn the [PUSH] Dial to select [MANUAL] and then press the [PUSH] Dial.

7 Turn the [PUSH] Dial to adjust the iris value (F number).

8 Press the [MENU] Button twice to exit the Menu.
The indication of the selected iris value (F number) appears.

Range of iris adjustment
CLOSE (Closed) ➜ F16.0...F1.7 ➜ OP (Opened)
+0dB...+18dB
The nearer to [CLOSE] a value you select, the darker the picture becomes.
The nearer to [OP] a value you select, the brighter the picture becomes.
The figures with +dB show the Gain-up value. If you increase the value too much, the picture deteriorates.

Returning to the Normal Iris Value (F Number)
Set [MODE] on the Menu to [AUTO].



Adding New Sound on a Recorded Cassette
(Audio Dubbing)

To perform audio dubbing, the Remote Controller is necessary.
You can add music or narration to a recorded cassette.

- **If [AUDIO REC] on the [MENU (OTHERS)] Menu has been set to [16bit], performing audio dubbing will completely erase the previously recorded sound.** Therefore, if you intend to perform audio dubbing but also want to keep the original sound, be sure to set [AUDIO REC] on the [MENU (OTHERS)] Menu to [12bit] before making the original recording.
- It is not possible to perform audio dubbing onto recordings made in the LP Mode. (➜ 24)

1 Insert the recorded cassette and set the [POWER ON/OFF] Switch to [ON].

2 Press the [VCR/CAMERA] Button so that the [VCR] Lamp lights.

3 At the point from which you want to insert the new sound, switch the Movie Camera over to the Still Playback Mode.

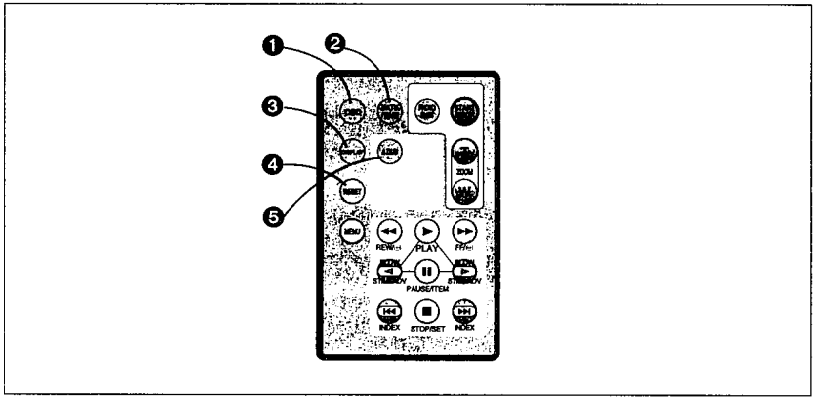
4 Press the [A.DUB] Button on the Remote Controller.

5 Press the Pause Button [II] on the Remote Controller to start audio dubbing.

Stopping Audio Dubbing
Press the Pause Button [II] on the Remote Controller.
The Movie Camera is again in the Still Playback Mode.

Playing Back the Sound Recorded with Audio Dubbing

- If you set [AUDIO REC] on the [MENU (OTHERS)] Menu to [12bit] for the original recording, the sound added with audio dubbing and the original sound are played back as follows depending on the setting of [AUDIO OUT] on the VCR Mode Menu (➜ 118-124):
  ST1: The original sound alone is played back.
  ST2: The dubbed sound alone is played back.
  MIX: The original sound and the sound added with audio dubbing are played back together.
- **Do not perform audio dubbing onto unrecorded parts of the tape. This could cause the playback picture and sound to be distorted.**
- If you reset the Tape Counter to zero at the point where you want the audio dubbing to end and turn on the memory Stop Function (➜154), the audio dubbing automatically stops when the tape reaches that point.



Remote Controller

Using the wireless Remote Controller supplied with the Movie Camera allows operating most of the Movie Camera's major functions from a distance.

Buttons on the Remote Controller

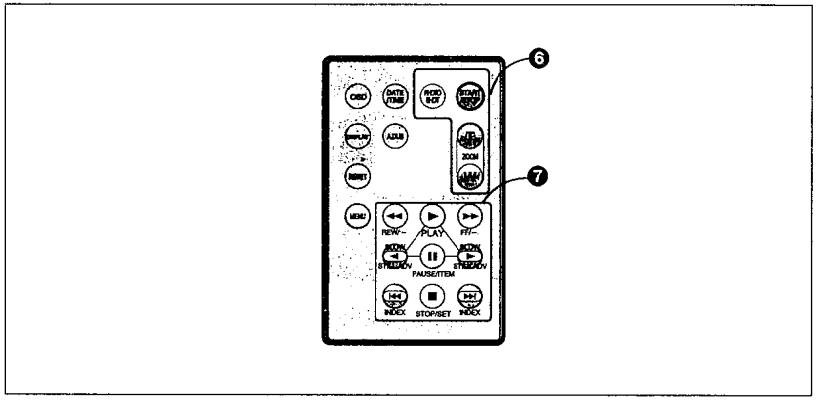
❶ Indication Output Button [OSD] (➔ 52)
To display the function and operation indications on a connected TV.

❷ Date and Time Button [DATE/TIME] (➔ 44)
To make the Date/Time Indication appear or disappear in the picture during recording and playback.

❸ Indication Shift Button [DISPLAY] (➔ 162)
To select the desired Counter Indications.

❹ Reset Button [RESET] (➔ 154)
To reset the Tape Counter to zero.

❺ Audio Dubbing Button [A.DUB] (➔ 88)
To perform audio dubbing.



❻ Controls for Recording and Sound Volume

Photoshot Button [PHOTO SHOT] (➔ 38)
To record still pictures.

Recording Start/Stop Button [START/STOP] (➔ 30)
To start and pause recording.

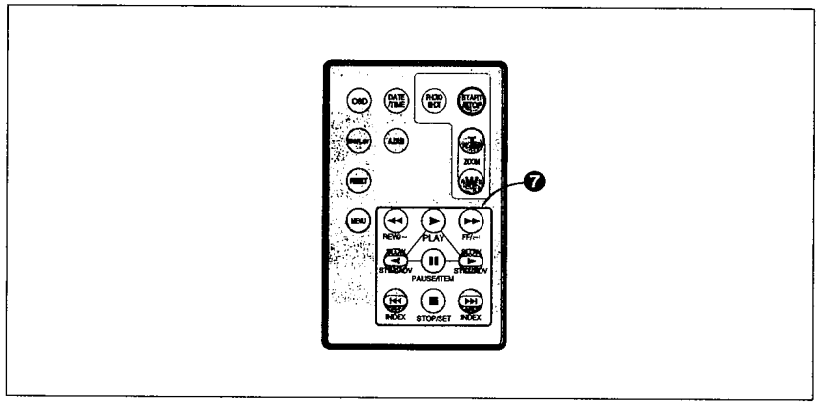
Zoom Buttons [ZOOM]
To zoom in and out. (➔ 36)

❼ Controls for Playback/Menu Setting

Rewind/Review Button [◀◀]
To start review playback (➔ 46) if pressed during normal playback; and to rewind the tape if pressed in the Stop Mode.
Also to activate the Camera Search Function (➔ 56) in reverse direction if kept pressed in the Recording Pause Mode. Pressing it briefly activates the Recording Check Function (➔ 32).

Fast-forward/Cue Button [▶▶]
To start cue playback (➔ 46) if pressed during normal playback; and to fast-forward the tape if pressed in the Stop Mode.
Also to activate the Camera Search Function (➔ 56) in forward direction if kept pressed in the Recording Pause Mode.

Play Button [▶] (➔ 44)
To start playback.



❼ Slow Motion/Still Advance Button [◂I, I▸] (➔ 48, 50)
To perform Slow Motion Playback if pressed in the Normal Playback Mode; and to perform Still Advance Playback if pressed in the Still Playback Mode.
(◂I: in reverse direction, I▸: in forward direction)

Index Search Button [I◀◀ , ▶▶I] (➔ 62, 64)
To search for recorded scenes marked with an index signal and for still images recorded in the Photoshot Mode.
(I◀◀: in reverse direction, ▶▶I: in forward direction)

Stop Button [■] (➔ 44)
To stop the tape.

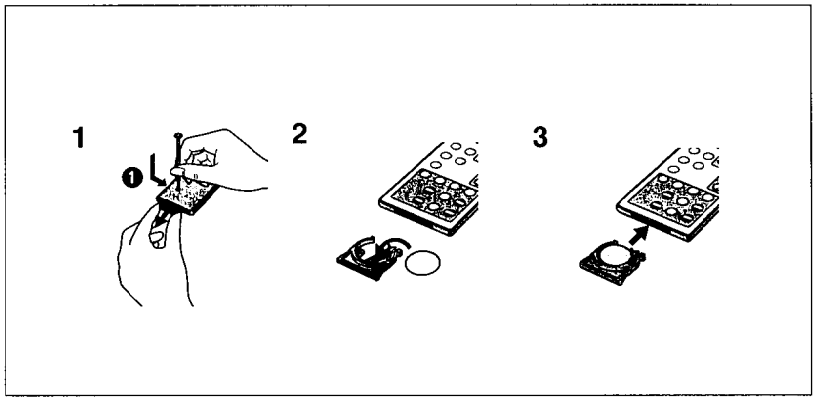
Pause Button [❚❚] (➔ 50)
To pause playback. The playback picture stands still.

Using the Menu Button [MENU]
Pressing the Menu Button [MENU] displays the Menu. In this case, the functions of the following buttons are changed:

Pause Button → Item Button
To select items on the Menu.

Stop Button → Setting Button
To set the mode for the selected item.

- The iris and the shutter speed cannot be adjusted with the Remote Controller. If you want to adjust them manually, use the [PUSH] Dial on the Movie Camera. (➔ 84, 86)



Remote Controller
(Continued)

■ Inserting the Button-type Battery
Insert the supplied button-type battery before using the Remote Controller.

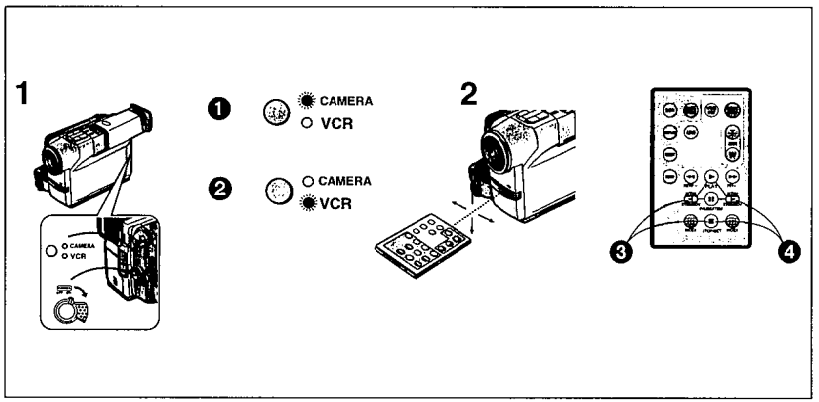
1 Pull out the Battery Holder while sliding the Stopper with a pointed object in the direction of the arrow ❶.

2 Insert the button-type battery with the stamped (+) mark facing downward.

3 Insert the Battery Holder into the Remote Controller.

- When the button-type battery is exhausted, replace it with a new CR2025 battery. (The life of the battery is about 1 year. However, it depends on the frequency of use.)
- **Keep the button-type battery out of the reach of children.**
- Make sure you insert the battery with its poles correctly aligned.

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.



■ Using the Remote Controller

1 Set the [POWER ON/OFF] Switch on the Movie Camera to [ON].

- When the [CAMERA] Lamp lights, you can use the recording functions. ❶
- If you want to use the playback functions, press the [VCR/CAMERA] Button so that the [VCR] Lamp lights. ❷

2 Aim the Remote Controller at the Remote Control Sensor on the Movie Camera and press the appropriate button.

Distance to the Movie Camera: Less than 5 metres.
Angle: Approximately 15° up, down, left and right from centre axis.

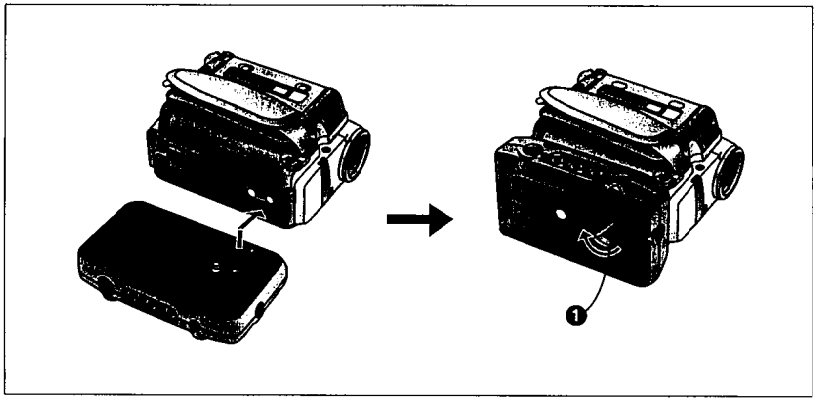
- The operative range described above is valid for using the Remote Controller indoors. When using it outdoors or uncer strong lights, it may not work correctly even within the above range.
- Within a distance of about 1 metre, it is also possible to use the Remote Controller from the side.

Selecting the Remote Controller Mode
When using two Movie Cameras at the same time, selecting different Remote Controller Modes makes it possible to operate them separately.

- If the Remote Controller Mode set on the Movie Camera and on its Remote Controller are not matched, the [REMOTE] Indication appears.
- Replacing the button-type battery in the Remote Controller automatically resets it to the [VCR1] Mode.
- Set [REMOTE] on the [MENU(OTHERS)] Menu to the desired Remote Controller Mode. (➔ 118-122)

❸ **Press the [◂◂] Button and the [■] Button simultaneously.**
This selects the [VCR2] Mode.

❹ **Press the [▸▸] Button and the [■] Button simultaneously.**
This selects the [VCR1] Mode.



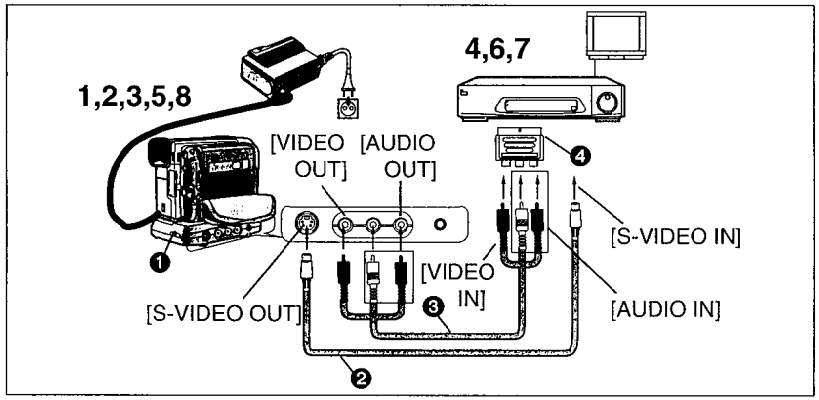
Copying onto an S-VHS (VHS) Cassette
(Dubbing)

If you attach the Output Terminal Box [AV ONE TOUCH STATION], you can copy cassettes recorded with this Movie Camera onto S-VHS or VHS cassettes.

Attaching the Output Terminal Box [AV ONE TOUCH STATION]

1 Attach the Output Terminal Box [AV ONE TOUCH STATION] to the underside of the Movie Camera with the Screw ❶.

- Before copying, press the [OSD] Button on the Remote Controller (➔ 52) so that no indications appear. Otherwise, the Counter Indication and function indications are also recorded onto the cassette.



After connecting all equipment as shown above, perform the following operations:

1 **Movie Camera:**
Set the [POWER ON/OFF] Switch to [ON].

2 **Movie Camera:**
Insert the recorded cassette.

3 **Movie Camera:**
Press the [VCR/CAMERA] Button so that the [VCR] Lamp lights.

4 **VCR:**
Insert an unrecorded cassette with intact erasure prevention tab.

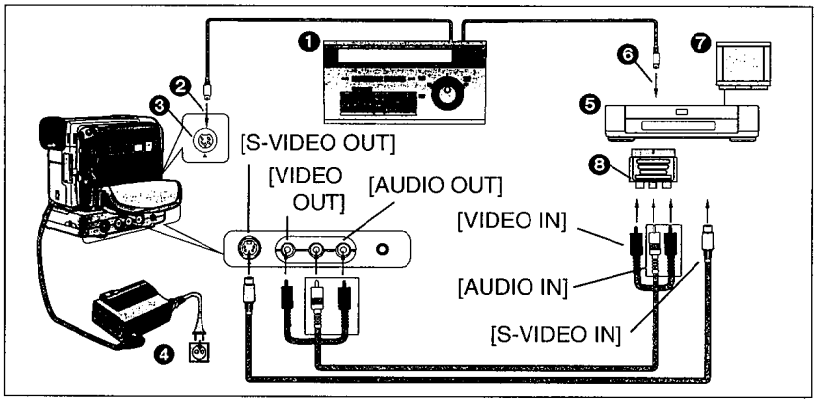
5 **Movie Camera:**
Press the Play Button [▶] to start play back.

6 **VCR:**
Start recording.

7 **VCR:**
Press the Pause or Stop Button to stop recording.

8 **Movie Camera:**
Press the Stop Button [■] to stop playback.

❶ Output Terminal Box [AV ONE TOUCH STATION]
❷ S-Video Cable
❸ AV Cable
❹ 21-Pin Adaptor



Copying with the Help of an Editing Controller

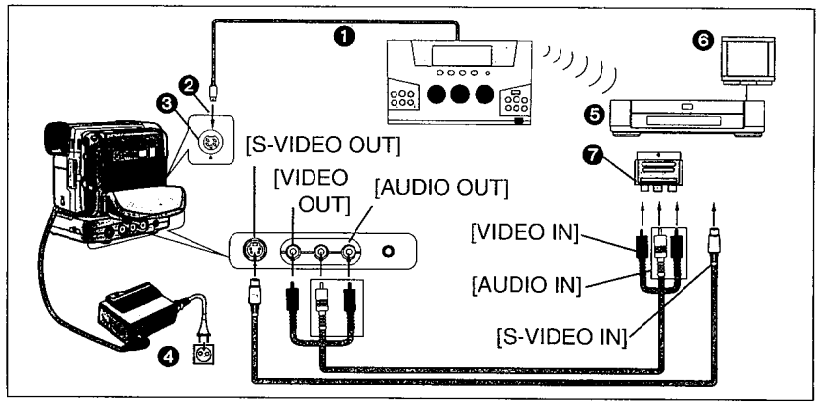
If you connect the Movie Camera to a Editing Controller equippec with 5-pin Edit Socket, this Movie Camera's playback functions can be controlled from the Editing Controller
(The Output Terminal Box [AV ONE TOUCH STATION] is necessary.)

When Connecting the Editing Controller VW-EC500E ❶ (optional)

- A VCR equipped with 5-pin Edit Socket is necessary.
- When you connect the VW-EC500E to the Movie Camera, an adjustment on the VW-EC500E is necessary. For the operation of the Editing Controller, refer to its operating instructions.

When Editing with Time Code
Press the [DISPLAY] Button on the Remote Controller to make the Time Code appear.
- When the Time Code is displayed , the Time Code Signal is output from the Edit Socket.
- When the Counter Indication is displayed, the Linear Tape Counter Signal is output.

❷ To Edit Socket
❸ Edit Socket
❹ Connect the AC Adaptor.
❺ VCR (optional)
❻ To Edit Socket
❼ TV (optional)
❽ 21-Pin Adaptor

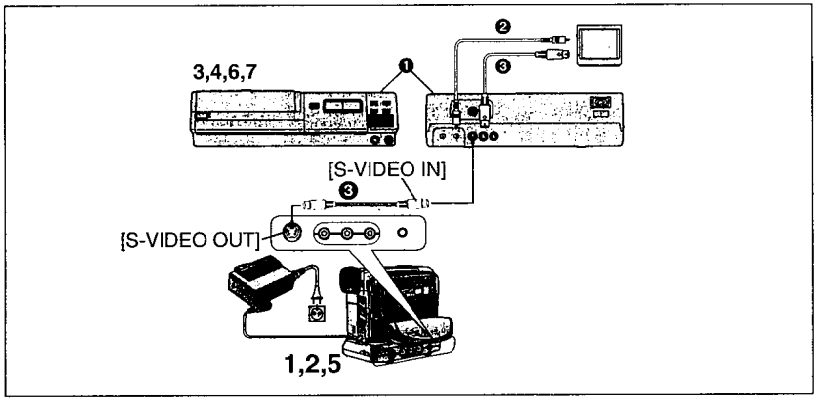


When Connecting the Editing Controller VW-EC1E (optional)
- When you use the Editing Controller VW-EC1E ❶, it is not necessary to connect the VW-EC1E to the Edit Socket on the VCR. As the VCR's operation is performed via remote controller, editing is also possible onto VCRs not equipped with an Edit Socket.
- For the operation of the Editing Controller, refer to its operating instructions.

When Connecting the Editing Controller VW-EC310E to this Movie Camera, such events as described below may occur:
- The editing precision may be bad.
- Editing cannot be performed correctly.

Therefore, we recommend that you use the VW-EC500E or the VW-EC1E as Editing Controller with this Movie Camera.

❷ To Edit Socket
❸ Edit Socket
❹ Connect the AC Adaptor.
❺ VCR (optional)
❻ TV (optional)
❼ 21-pin Adaptor



Using the Movie Camera with a Video Printer

If you connect the Movie Camera to a Video Printer, you can print still pictures from scenes recorded with the Movie Camera.

Movie Camera:

1 Set the [POWER ON/OFF] Switch to [ON] to turn the Movie Camera on.

2 Insert a recorded cassette and press the [VCR/CAMERA] Button so that the [VCR] Lamp lights.

5 Press the Play Button [▶].

Video Printer:

3 Turn the Video Printer on.

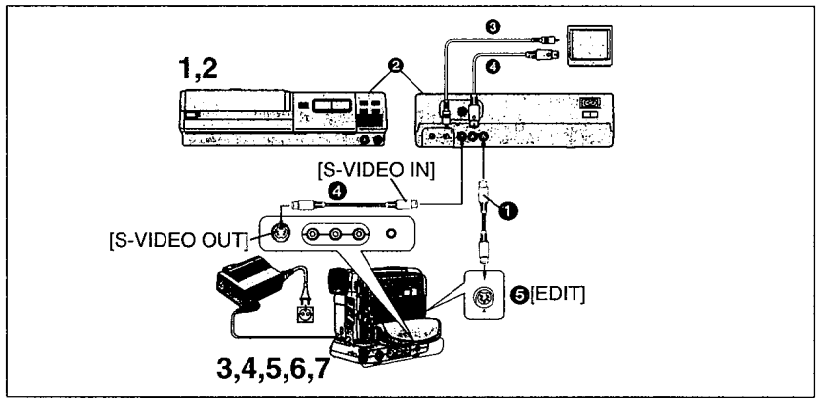
4 If the Video Printer is equipped with Super Image Stabilizer Function and/or Moving/Still Picture Mode, adjust them according to the picture being input.

6 Store the image in memory.

7 Start printing.

- Read the operating instructions of the Video Printer ❶.

❷ Video Cable (supplied with the Video Printer)
❸ S-Video Cables (supplied with the Movie Camera and Video Printer)



Using the Automatic Printing Function (Autoprint)

If you connect the Movie Camera to a Video Printer ❷ equipped with 5-pin Edit Socket, you can use the Auto Print Function to automatically print still pictures recorded in the Photoshot Function.

Video Printer:

1 Turn the Video Printer on.

2 Make the necessary settings on the Video Printer according to the input signal.

Movie Camera:

3 Set the [POWER ON/OFF] Switch to [ON] to turn the Movie Camera on.

4 Press the [VCR/CAMERA] Button so that the [VCR] Lamp lights.

5 Search for the first still picture from which you want to start printing with the Auto Print Function.
If you want to print all still pictures recorded on the cassette, rewind the tape to its beginning.

6 Press the [MENU] Button.

7 Set [AUTOPRINT] on the Menu to [ON].
Automatic printing starts.

- If you want to stop the automatic printing in the middle, press the Stop Button [■] on the Movie Camera.

❶ Edit Cable VW-K5E (optional)
❸ Video Cable (supplied with the Video Printer)
❹ S-Video Cables (supplied with the Movie Camera and Video Printer)
❺ Edit Socket

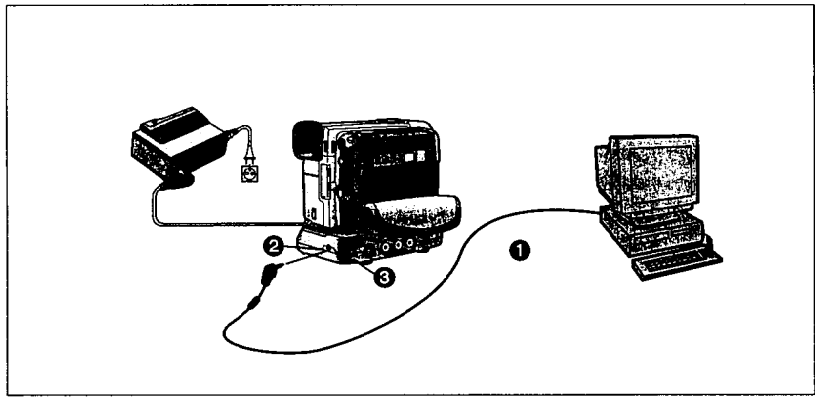
- When the cooling function of the Video Printer is activated and the printing speed slows down, the automatic printing may stop. In this case, set [AUTOPRINT] to [ON] again.

- If you replace the ink cassette or paper during printing, the same picture may be printed twice.

- If still pictures are recorded successively in the Photoshot Mode, some pictures may be skipped during printing.

- Before storing an image in memory on the Video Printer, press the [OSD] Button (→ 52) on the Remote Controller of the Movie Camera so that no indications appear in the picture. Otherwise, the Counter Indication and other function indications are also printed in the picture.

- In the following cases, some pictures may be skipped when printing with the Auto Print Function.
  - When you print still pictures recorded in the Photoshot Mode on a video camera of another brand.
  - If you turn the Movie Camera on and off several times (3 times or more) between recording two still pictures in the Photoshot Mode.
  - When you record a still picture in the Photoshot Mode on the same part of a cassette where a Photoshot picture was recorded before.
  - When you select a different recording speed (SP/LP) between the recording of two still pictures in the Photoshot Mode.
  - At the first Photoshot Picture to be printed.



Using the Movie Camera with a Computer

The Personal Computer Connection Kit VW-DTA1E (optional) for Digital Video Cameras makes it possible to connect the Movie Camera to a computer and transmit still video images to it. (The Output Terminal Box is also necessary.)

Computer System Requirements

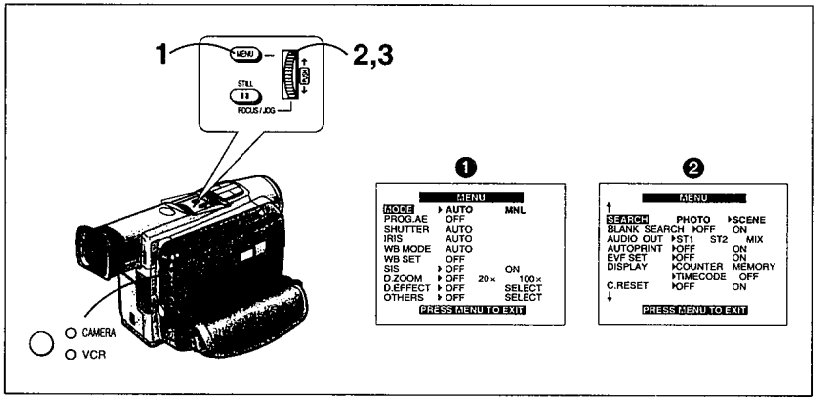
DV STUDIO can be installed in a PC/AT personal computer which can run Microsoft® Windows® 95.

Compatible machines:	Personal computer with 80486DX4 or higher CPU (Pentium™ or higher recommended)
Graphic card:	True Color (approx. 16.7 million colours) recommended (operation also possible even with 256 colours)
Installed memory:	16 MB or more (32 MB or more recommended)
Free hard disk space:	At least 10 MB
Disk drive:	CD-ROM drive
Serial port:	RS-232C (D-sub 9pin)
Other requirements:	Mouse

To connect the Movie Camera to the computer, use the special Interface Adaptor ❶ contained in the Personal Computer Connection Kit.

- Pictures that you intend to import into computer applications should be recorded in the SP Mode.
- When recording, take care that the Time Code is uninterrupted from the beginning of the tape.
- Windows® 95 is a trademark of Microsoft Corporation U.S.A.
- All other company and product names in the operating instructions are trademarks of their respective corporations.

❷ Digital Still Picture Terminal
❸ Output Terminal Box [AV ONE TOUCH STATION]



Using the Menu Screen

This Movie Camera displays the settings of various functions in Menus to make it easy to select the desired functions and settings.

1 Press the [MENU] Button.
The Menu appears.

2 Turn the [PUSH] Dial to select the item to be set.
Turning the [PUSH] Dial changes the highlighted item.

3 Press the [PUSH] Dial to set the selected item to the desired mode.
Every press moves the cursor [▶] to the next mode.

Displaying the Camera Mode Menu ❶

Press the [MENU] Button in the Recording Pause Mode.

- While the Menu is displayed, recording is not possible.
- During recording, displaying the Menu is not possible.

Displaying the VCR Mode Menu ❷

Press the [MENU] Button when the [VCR] Lamp is lit.

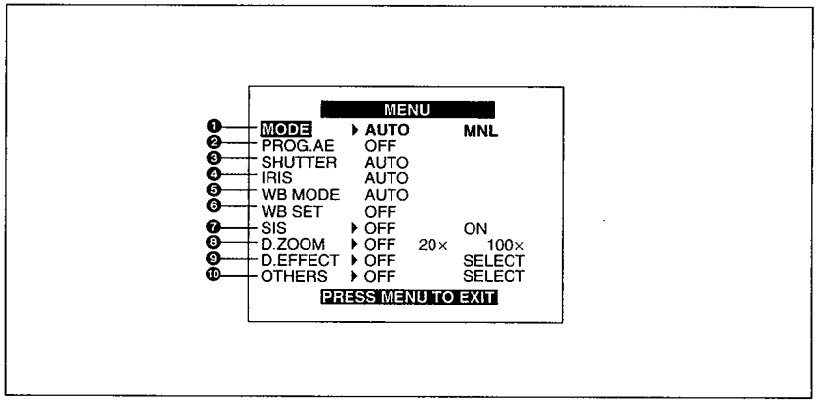
- While the Menu is displayed, playback is not possible.
- During playback, displaying the Menu is possible.

Exiting the Menu

Press the [MENU] Button again.

Note About the Settings Made on the Menu

The settings you selected on the Menu are maintained when you turn the Movie Camera off. However, if you disconnect the power supply unit (Battery or AC Adaptor) from the Movie Camera before turning it off, the selected settings may not be maintained.



Menu Functions

Camera Mode Menu

❶ **Recording Mode [MODE] (➔ 30)**

❷ **Auto Exposure Modes [PROG.AE] (➔ 68)**

❸ **Shutter Speed [SHUTTER] (➔ 84)**

❹ **Iris [IRIS] (➔ 86)**

❺ **White Balance Mode Selection [WB MODE] (➔ 80)**

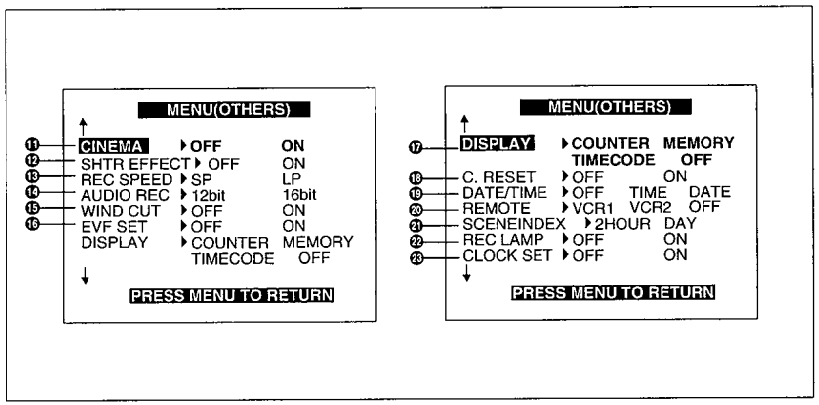
❻ **Manual White Balance Adjustment Mode [WB SET] (➔ 82)**

❼ **Super Image Stabilizer [SIS] (➔ 42)**

❽ **Digital Zoom [D.ZOOM] (➔ 36)**

❾ **Digital Effects [D.EFFECT] (➔ 74, 76, 78)**

❿ **Other Items [OTHERS] (➔ 122)**
If you set [OTHERS] to [SELECT], the [MENU (OTHERS)] Menu appears.


MENU(OTHERS)
⓫ CINEMA ▸OFF ON
⓬ SHTR EFFECT ▸OFF ON
⓭ REC SPEED ▸SP LP
⓮ AUDIO REC ▸12bit 16bit
⓯ WIND CUT ▸OFF ON
⓰ EVF SET ▸OFF ON
DISPLAY ▸COUNTER MEMORY
TIMECODE OFF
PRESS MENU TO RETURN
MENU(OTHERS)
⓱ DISPLAY ▸COUNTER MEMORY
TIMECODE OFF
⓲ C. RESET ▸OFF ON
⓳ DATE/TIME ▸OFF TIME DATE
⓴ REMOTE ▸VCR1 VCR2 OFF
㉑ SCENEINDEX ▸2HOUR DAY
㉒ REC LAMP ▸OFF ON
㉓ CLOCK SET ▸OFF ON
PRESS MENU TO RETURN

⓫ **Cinema-like Format Recording [CINEMA] (➔ 40)**

⓬ **Shutter Effect [SHTR EFFECT] (➔ 38)**

⓭ **Recording Speed Mode [REC SPEED] (➔ 24)**

⓮ **Audio Recording Mode [AUDIO REC] (➔ 88)**

⓯ **Wind Buffer [WIND CUT]**
If you set [WIND CUT] to [ON], the noise of the wind hitting the Microphone is reduced. However, this also causes a slight deterioration of the sound reproduction in the bass range.

⓰ **Finder Adjustment [EVF SET] (➔ 130)**

⓱ **Counter Display Mode [DISPLAY] (➔ 162)**

⓲ **Counter Reset [C.RESET] (➔ 154)**
To reset the counter to zero.
However, the Time Code cannot be reset.

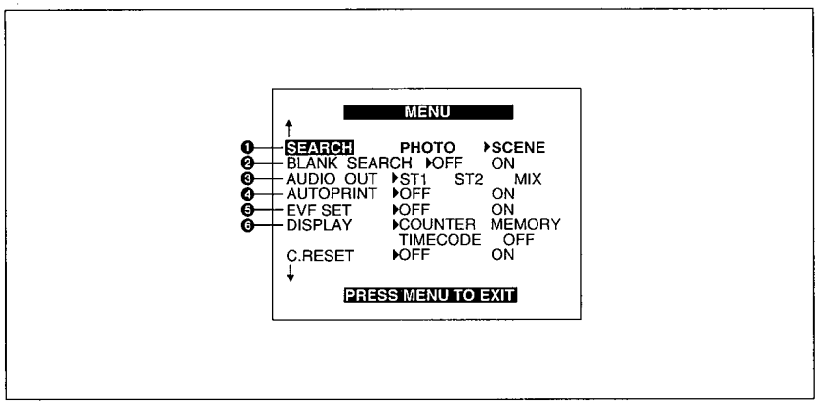
⓳ **Date and Time Indication [DATE/TIME] (➔ 44)**

⓴ **Remote Controller Mode [REMOTE] (➔ 100)**

㉑ **Scene Index [SCENEINDEX] (➔ 60)**

㉒ **Recording Lamp [REC LAMP] (➔ 30)**

㉓ **Date and Time Setting [CLOCK SET] (➔ 126)**



VCR Mode Menu

❶ **Index Search [SEARCH] (➔ 62, 64)**

❷ **Blank Search [BLANK SEARCH] (➔ 58)**

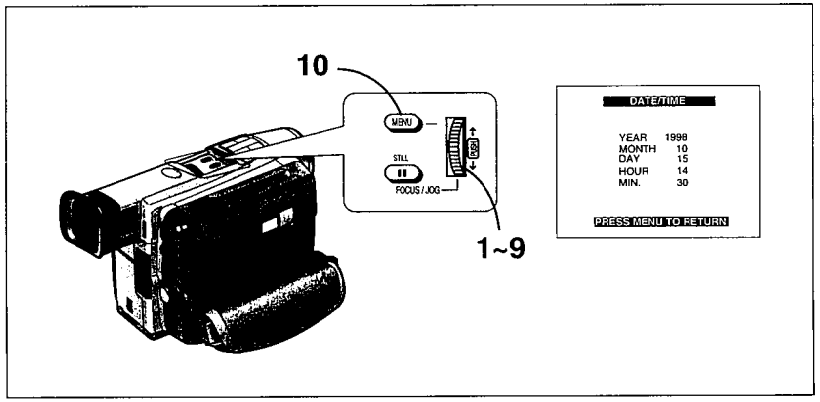
❸ **Audio Output Mode [AUDIO OUT] (➔ 90)**

❹ **Automatic Printing [AUTOPRINT] (➔ 112)**

❺ **Finder Adjustment [EVF SET] (➔ 130)**

❻ **Counter Display Mode [DISPLAY] (➔ 162)**

- **All other items on the VCR Mode Menu not shown above are the same as on the Camera Mode Menu. (➔ 122)**



Setting the Date and Time

Selecting [OTHERS] on the Menu (either Camera or VCR Mode Menu) and setting [CLOCK SET] to [ON] displays the menu shown above. (➔ 122)

For example: To set the clock to 15th October 1998, 14:30.

1 **Turn the [PUSH] Dial to set to [1998].**

2 **Press the [PUSH] Dial to select [MONTH].**

3 **Turn the [PUSH] Dial to set to [10].**

4 **Press the [PUSH] Dial to select [DAY].**

5 **Turn the [PUSH] Dial to set to [15].**

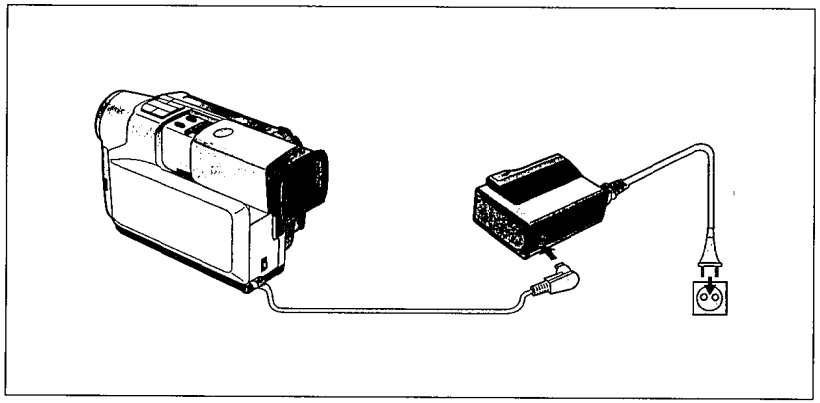
6 **Press the [PUSH] Dial to select [HOUR].**

7 **Turn the [PUSH] Dial to set to [14].**

8 **Press the [PUSH] Dial to select [MIN.].**

9 **Turn the [PUSH] Dial to set to [30].**

10 **Press the [MENU] Button to finish the date and time setting.**
The operation of the clock starts from [00] seconds.



- As small imprecisions in the time indication can occur, we recommend that you confirm that the time shown is correct before you start recording. When the [ ] indication appears, charge the built-in battery and set the date and time again.
- The years change in the following order: 1990 → 1991 → ... → 2089 → 1990 →..

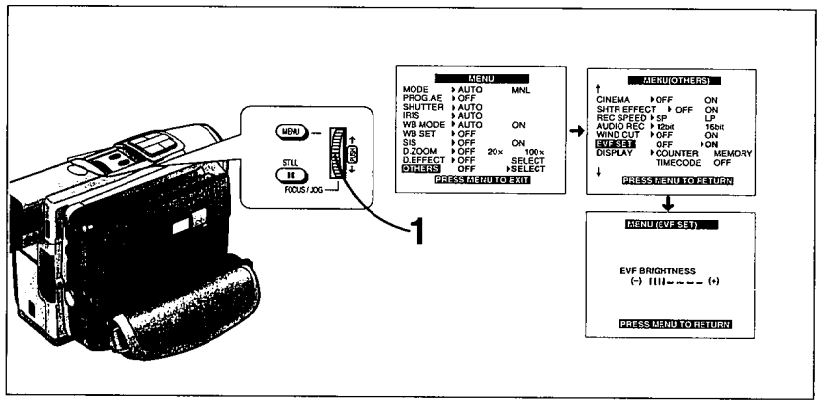
Charging the Built-in Battery

The built-in battery maintains the operation of the clock. When the [ ] indication appears, the built-in battery is discharged. Charge the discharged battery in the following way and after charging is finished, set the date and time.

1 Connect the AC Adaptor to the Movie Camera and to an AC mains socket. (→ 16)

2 Leave the Movie Camera turned off.

3 Leave the Movie Camera in this condition for approximately 4 hours.
After charging for 4 hours, the built-in lithium battery can power the clock for approximately 3 months.



Finder Brightness

Selecting [OTHERS] on the Menu (either Camera or VCR Mode Menu) and setting [EVF SET] to [ON] displays the following items. (→ 118-122)

Finder Brightness [EVF BRIGHTNESS]
To adjust the brightness of the Finder. The Bar Indication is divided into 8 steps. The more vertical bars are shown, the brighter is the screen.

1 Turn the [PUSH] Dial. Turning it increases or decreases the number of vertical bars of the Bar Indication.

Cautions for Use

Take care that no water enters the Movie Camera when using it in the rain and snow or on the beach.
- The Movie Camera and the cassette could become damaged. (It might not be repairable.)

Keep the Movie Camera away from magnetized equipment (TVs, TV games, etc.).
- If you use the Movie Camera on or near a TV, the electromagnetic radiation may cause picture and sound distortion.
- Strong magnetic fields generated by speakers and large motors may damage the recordings on tape and distort the picture.
- The electromagnetic radiation from micro-computers can adversely influence the Movie Camera and cause picture and sound distortion.
- If the Movie Camera is adversely influenced by magnetized equipment and does not work correctly turn the Movie Camera off, remove the Battery or disconnect the AC Adaptor and insert the Battery or connect the AC Adaptor again. Then turn the Movie Camera on.

Do not use the Movie Camera near a radio transmitter or high-voltage power line.
- If you record near a radio transmitter or high-voltage power line, the recorded picture and sound may be adversely influenced.

Do not use the Movie Camera for surveillance and other industrial applications.
- If the Movie Camera is being used for a long time, the inside temperature rises and this may cause malfunction.
- This Movie Camera is not designed for industrial use.

Take care that no sand and fine dust enters the Movie Camera when using it on a beach or similar places.
- Sand and dust could damage the Movie Camera and cassette. (Be careful when inserting and removing the cassette.)

Take care not to drop the Movie Camera when carrying it.
- Strong shocks could damage the body of the Movie Camera and cause malfunction.
- When carrying, hold the Movie Camera by the Grip Belt or Shoulder Strap and handle it with care.

Do not spray insecticide or volatile agents on the Movie Camera.
- Such agents could deform the body and cause the surface coating to peel off.
- Do not leave the Movie Camera in direct contact with rubber or plastic products for a long time.

Do not use benzine or thinner for cleaning.
- They could deform the body and cause the surface coating to peel off.
- Before cleaning, remove the Battery or unplug the AC Mains Cable from the AC mains socket.
- Wipe the Movie Camera with a soft, clean cloth. To remove persistent stains, wipe with a cloth moistened with mild detergent diluted with water, and then finish with a dry cloth.

After use, always take out the cassette and remove the Battery or unplug the AC Mains Cable from the AC mains socket.
- If you leave the cassette in the Movie Camera, the tape can become loosened and damaged.
- If you leave the battery in the Movie Camera for a long time, the voltage level may drop very low so that the Battery cannot be used any more even after charging.

■ Condensation

Determining Whether Condensation Has Formed Inside and Remedy for Condensation
If the Condensation Indication flashes after you turn on the Movie Camera, condensation has formed inside the Movie Camera. In this case, the Movie Camera automatically switches off after a few seconds. Remedy as follows:

1 **Take out the cassette.**
All other functions do not work. Depending on the amount of condensation, it may not be possible to take out the cassette. In this case, wait 2 - 3 hours before taking out the cassette.

2 **Leave the Cassette Compartment open and wait for 2 - 3 hours.**
The required time depends on the amount of condensation and the ambient temperature.

3 **After 2 - 3 hours, turn the Movie Camera on and check if the Condensation Indication is not displayed.**
Even if the Condensation Indication is no longer displayed, wait 1 more hour for added safety before using the Movie Camera again.

Pay Attention to Condensation Even Before the Condensation Indication Appears.
- As condensation forms gradually, the Condensation Indication may not appear for the first 10-15 minutes after the condensation has formed inside.
- In an extremely cold place, the condensation could freeze and turn into frost. In such a case, it takes an additional 2 - 3 hours for the frost to first melt into condensation and then to be dissolved.

Remedy for a Fogged-up Lens
Set the [POWER ON/OFF] Switch to [OFF] and leave the Movie Camera in this condition for about 1 hour. When the lens has reached about the same temperature as its surroundings, it automatically clears up.

■ Video Head Clogging and Remedy
If the video heads (which contact the tape) are dirty, the playback picture contains rectangular blocks of picture noise or the whole screen becomes blue. If they are very dirty, the recording performance deteriorates and in the worst case, recording may not be possible at all.

Causes of Dirty Video Heads
- A lot of dust in the air.
- High-temperature and high-humidity environment.
- Damaged tape.
- Long-time use.

Periodic Inspection
To ensure optimum picture quality, we recommend that you have worn out parts such as video heads replaced after approximately 1000 hours of use. (However, this depends considerably on the conditions of use such as temperature, humidity and dust.)

■Optimum Use of the Battery

Special Characteristics of the Battery
This Battery is a rechargeable lithium-ion battery. Its ability to generate electric energy is based on an internal chemical reaction. This reaction is easily influenced by ambient temperature and humidity, and the useful operation time that the Battery can provide becomes shorter at high and low temperatures. When used in extremely cold surroundings, the Battery may only be able to provide approximately 5 minutes of operation time. If the Battery becomes extremely hot, a protection function is activated and prevents the use of the Battery for some time.

After Use, Always Take Out the Battery.
Be sure to remove the Battery from the Movie Camera. (If it is left in the Movie Camera, a small amount of electric current is consumed even if the Movie Camera is turned off.) Leaving the Battery inserted in the Movie Camera for a very long time could cause it to become excessively discharged, so that it cannot be used any more even after charging.

Discarding a Battery That Has Become Unusable
- The usable life of the Battery is limited.
- Do not throw the Battery in a fire because it could explode.

Keep the Battery's Terminals Clean.
Be careful that the terminals (the two small round openings) do not get plugged up with dust, dirt or other substances.
If you accidentally drop the Battery, confirm that the Battery itself and the terminals are not deformed. Inserting a deformed Battery in the Movie Camera or attaching it to the AC Adaptor could damage the Movie Camera or the AC Adaptor.

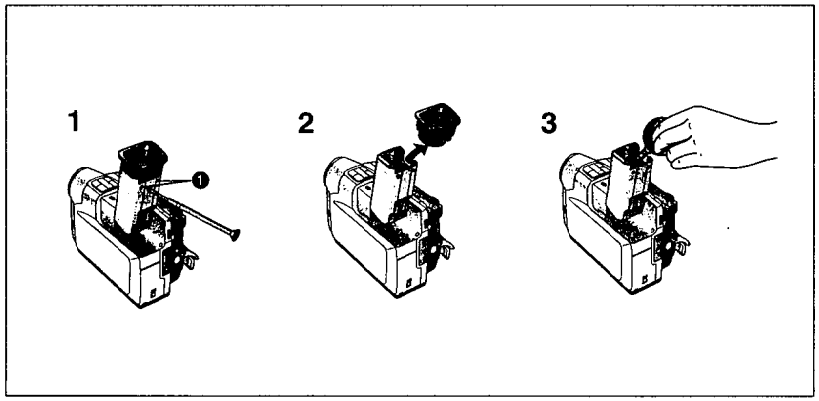
■ Precautions for Storage

Before Storing the Movie Camera, Take out the Cassette and Remove the Battery.
Store all equipment in a dry place where the temperature remains relatively constant.
(Recommended temperature is 15°C - 25°C and recommended relative humidity is 40% - 60%.)

Movie Camera
- Wrap it with a soft cloth to prevent dust from entering.

Battery
- Extremely low or high temperature shortens the Battery life.
- Storing it in places with oily smoke and a lot of dust could cause the terminals to get rusty, and this can result in malfunction.
- **Do not allow metal objects (such as necklaces and hair pins) to touch the battery terminals. Short-circuiting may occur and generate heat, and touching it in this condition could inflict serious burns.**
- Store the Battery in discarged condition. If you store the Battery for a long time, we recommend that you charge it once a year and completely use up the charge before storing it again in discharged condition.

Cassette
- Rewind the tape to its beginning before storing. Leaving the cassette with the tape stopped halfway for more than 6 months (depending on the storing condition) loosens the tape. Be sure to rewind it to the beginning.
- Put the cassette in its case to store it. Dust, direct sunlight (ultraviolet rays) and humidity could damage the tape. Dust contains hard mineral particles and cassettes with dust damage the video heads and other parts of the Movie Camera. Make it a habit to always put the cassette back into its case.
- Completely wind the tape forward and then rewind it once every half year. Leaving the cassette for more than a year without winding/rewinding it may deform the cassette because of swelling and shrinking of the tape due to changes in temperature and humidity. Also, the tape may stick together.
- Do not place the cassette near strongly magnetized objects or equipment.
- The tape surface is coated with microscopic magnetic particles and they record signals. Such objects as magnetic necklaces and toys have stronger magnetic force than commonly thought, and this could erase the recorded contents and cause noise in picture and sound.



■ Lens Hood

- If you want to attach a filter from the Filter Kit (optional), be sure to first remove the Lens Hood.
  However, during recording in the Cinema Mode with a filter attached, the four corners of the picture may become dark (vignetting effect), when you push the [W/T] Zoom Lever toward [W].

■ Cleaning the Finder

If dust has entered the Finder, clean it in the following way:

1 **Unscrew the screw ❶.**
2 **Remove the Eyecup.**
3 **Remove the dust with a blower brush (not supplied).**
4 **Reattach the Eyecup.**
5 **Tighten the screw ❶.**

■ Repeat Playback

- If you keep the Playback Button [▶] pressed for more than 5 seconds, the Movie Camera switches over to the Repeat Playback Mode and the [R▷] Indication appears. (To cancel the Repeat Playback Mode, set the [POWER ON/OFF] Switch to [OFF].)

Glossary

■ Digital Video System

In the digital video system, picture and sound are converted into digital signals and recorded onto the tape. This completely digital recording allows recording and playback of picture and sound with minimum quality deterioration.
In addition, such data as Time Code, Date and Time are also automatically recorded as digital signals.

Features

- Superior picture resolution
- Excellent signal-to-noise ratio
- Stable pictures
- Minimised quality deterioration in dubbing
- Minimised cross colour distortion
- PCM digital sound
- No picture deterioration in LP Mode
- 6.35 mm-wide tape
- Compact cassette with long recording time
- Minimised quality deterioration in editing
- Time Code editing

Compatibility with S-VHS or VHS Cassettes

As this Movie Camera uses a digital method for recording picture and sound, there is no compatibility with conventional S-VHS or VHS video equipment using analog recording methods.
In addition, the size and shape of the cassette are completely different.

Compatibility with Output Signals

As the video and audio signals output from the audio and video output sockets are analog — the same as in conventional video systems — you can connect this Movie Camera to your S-VHS or VHS VCR or TV for playback.

PCM Digital Sound

For recording of the sound, this Movie Camera offers the choice between two different PCM Audio Recording Modes.

- 16 bit, 48 kHz, 2 channels
- 12 bit, 32 kHz, 4 channels

The "16 bit, 48 kHz, 2 channels" Mode offers superior recording sound quality.
The "12 bit, 32 kHz, 4 channels" Mode lets you record the original sound in stereo on two channels and the dubbed sound in stereo on two separate channels.

Sub Code

The digital recording system offers the added capability of recording sub code containing various data.
The following data is recorded as sub code on this Movie Camera:

- Time code
- Recording date and time
- Index signals for locating still images recorded in the Photoshot Mode
- Index signals for locating the beginning of recorded scenes marked with index signal

■ Focus

If you look at an object through a magnifying glass and move it closer or further away from your eye, you will reach a point where the object becomes clearly visible. Being focused or in focus means that the subject can be seen with optimum clarity and sharpness.

Human Eyes

Human eyes have lenses as well, and when we look at objects at different distances, the shape of these lenses changes automatically so that we can always see these objects clearly.

Movie Camera

The image of the subject enters the Movie Camera through the lens and is converted into an electric signal (video signal) for recording onto magnetic tape. The focus is adjusted either manually or automatically by moving a focusing lens.

Auto Focus Adjustment

The Auto Focus System automatically moves the internal focusing lens forward or backward and adjusts the focus so that the subject can be seen clearly.
The Auto Focus Adjustment has the following characteristics:

- It adjusts until the vertical contours of the subject are as sharp and clean as possible.
- It adjusts the focus on the subjects with strong contrast.
- It adjusts the focus on the subject in the centre of the Finder.
  Unlike human eyes, the lens of the Movie Camera cannot instantaneously change the focus from a nearby to a distant subject and vice versa.

For the following subjects and recording situations, the Auto Focus System cannot provide precise adjustment.
Use the Manual Focus Mode instead. (➔ 34)

❶ **Recording subjects with a part of it near the Movie Camera and another part far away from it**
As the Auto Focus adjusts on the centre part of the image, it is often impossible to bring the nearby and distant parts of the subject into focus.
When you want to record a person with a distant mountain in the back, it is not possible to focus on both.

❷ **Recording subjects behind glass covered with dirt or dust**
As the focus is adjusted on the dirty glass, the subject behind the glass is out of focus. When recording a subject across a street on which cars are running, the focus may be adjusted on the cars.

❸ **Recording subjects in dark surroundings**
As the amount of light information entering through the lens is greatly reduced, the Movie Camera cannot adjust the focus precisely.

❹ **Recording subjects surrounded by objects with shiny surfaces or much light reflection**
As the Movie Camera adjusts the focus on objects with shiny surfaces or much light reflection, the subject may go out of focus.
Therefore, when recording at a lake or the sea, evening scenes, fireworks, or under special types of lighting, the subject may be out of focus.

❺ **Recording fast-moving subjects**
As the internal focusing lens is moved mechanically, it cannot follow fast-moving subjects without delay. Therefore, subjects like children running back and forth may temporarily go out of focus.

❻ **Subjects with weak contrast**
As the Movie Camera adjusts the focus based on vertical contours in the picture, subjects with little contrast such as a white wall may be out of focus.

■ White Balance Adjustment

While most recording with a Movie Camera is probably done outdoors under sunlight, video recording is also done very often under artificial light sources, both indoors and outdoors. However, each of these light sources gives the subject slightly different colours.

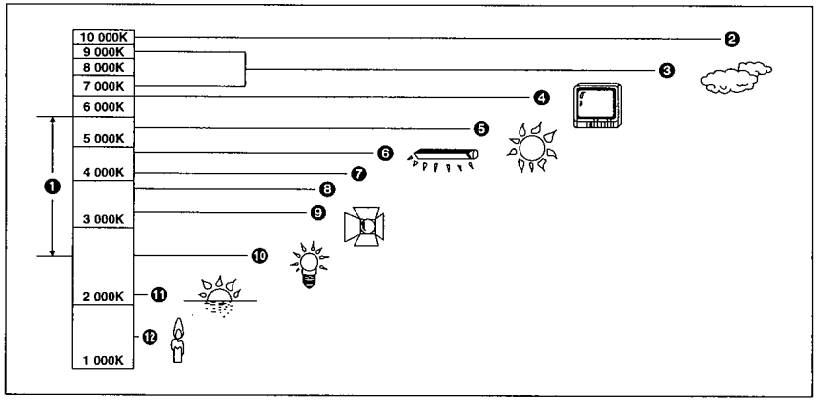
Human Eyes
Human eyes can easily adjust to different kinds of lighting and see an object with the same colours even under different lighting.

Movie Camera
Unlike human eyes, the Movie Camera does not have the innate ability to adapt to changes in lighting, and they influence the colours being recorded. Therefore, depending on the light source, the picture would be recorded with a bluish or reddish tint. To minimise the influence of the lighting on the colours of the subject, an adjustment called White Balance Adjustment is necessary.

White Balance Adjustment
The White Balance Adjustment determines the colour of the light and adjusts the colours so that white remains pure white. As white is the basic colour of the entire colour spectrum, if white is reproduced correctly, the other colours are correct and natural, too.

Auto White Balance Adjustment
This Movie Camera stores the optimum settings for several common light sources in memory. The Movie Camera judges the recording situation by determining the tint of the light received through the lens and by the White Balance Sensor (➔ 14), and it selects the setting for the most similar tint. This function is called Auto White Balance Adjustment.
However, as the white balance settings for only a few light sources are stored in memory, the white balance is not correctly adjusted for other lighting conditions.

For the range of different types of lighting within which the Auto White Balance Function can provide precise adjustment, refer to the chart (➔ 152). For recording under lighting conditions outside this range, the Auto White Balance Function does not work correctly, and the recorded picture has a red or blue cast. However, the same also applies,if the subject is lit by more than one light source, even if these light sources are within this range.



■ Colour Temperature

Every light source has its own colour temperature measured in Kelvin (K). The higher the Kelvin value, the more bluish the light; the lower the value, the more reddish the light. The Kelvin value is related to the tint of the light, but not directly to its brightness.
The range ❶ indicated in the illustration above shows the light sources for which this Movie Camera can provide precise white balance adjustment and, therefore, natural colours in the recorded pictures, when using the Full Auto Mode. For light sources outside this range, adjust the white balance manually (➔ 82). Also, additional lighting may be necessary.

❶ Control range of this Movie Camera's Auto White Balance Adjustment Mode

❷ Blue sky

❸ Cloudy sky (Rain)

❹ TV screen

❺ Sunlight

❻ White fluorescent lamp

❼ 2 hours after sunrise or before sunset

❽ 1 hour after sunrise or before sunset

❾ Halogen light bulb

❿ Incandescent light bulb

⓫ Sunrise or sunset

⓬ Candlelight

■ Time Code

Time Code signals are the data which indicates the time in hours, minutes, seconds and frames (25 frames/sec). Having this data included in the recording gives every single picture on the tape its own address.

- The time Code is automatically recorded as part of the sub code with every recording you make.
- When you insert a new (previously unrecorded) cassette, the Time Code automatically starts from zero. If you insert a recorded cassette, the Time Code continues where the time code of the last previous scene stopped. (In this case, the zero indication (0h00m00s00f) may appear after inserting the cassette, but when the recording starts, the Time Code records from the previous value).
- You cannot reset the Time Code to zero.
- In playback modes other than the Normal Playback Mode, the Time Code may not be displayed (or not be correct).
- Unless the Time Code is recorded continuously from the beginning of the tape, precise editing may not be possible. To ensure that the Time Code is recorded without interruption, we recommend that you use the Camera Search Function (➔ 56) or Blank Search Function (➔ 58) before starting to record a new scene.

■ Memory Stop Function

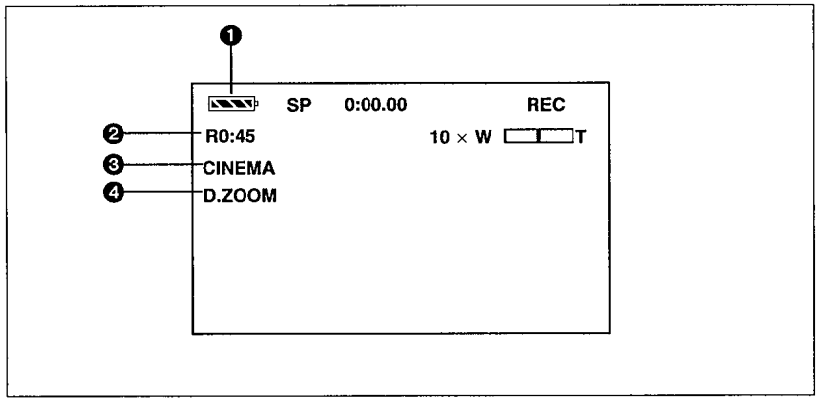
The Memory Stop Function is convenient for the following operations.

Rewinding or fast-forwarding the tape to a desired position

1 **Reset the Tape Counter at the tape position from which you want to play back later. (➔ 122)**
2 **Set [DISPLAY] on the Menu to [MEMORY]. (➔ 118-124)**
3 **Start playback or recording.**
4 After playback or recording is finished:
Press the [VCR/CAMERA] Button so that the [VCR] Lamp lights.
5 **Rewind the tape.**
The tape automatically stops approximately at the position at which you reset the counter to zero.

Stopping the editing automatically in the audio dubbing

1 **Reset the Tape Counter to zero at the tape position at which you want the editing to stop.**
2 **Set [DISPLAY] on the Menu to [MEMORY]. (➔ 118-124)**
3 **Play back a still picture at the point at which you want the audio dubbing to start.**
4 **Start the audio dubbing.**
The audio dubbing automatically stops approximately at the position at which you reset the counter to zero.



Indications in the Finder

❶ Remaining Battery Power
As the remaining battery power decreases, the indication changes as follows:
→ → → →
When the battery is completely discharged, the ( ) Indication flashes.
(When you are using the AC Adaptor, the Indication may appear, however, this has no meaning in this case.)

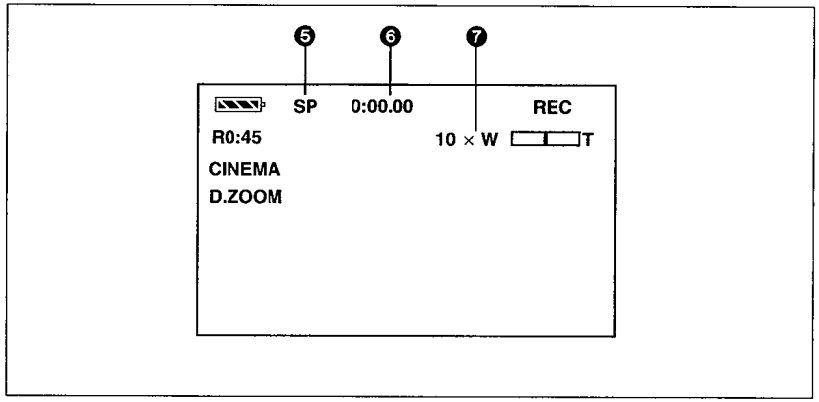
❷ Remaining Tape Time
The remaining tape time is displayed in minutes. (When it becomes less than 3 minutes, the indication starts to flash.)

- If a recording lasts less than 15 seconds, the Remaining Tape Time cannot be displayed correctly.
- The displayed remaining tape time may be shorter than the actual remaining tape time.

❸ Cinema Mode (➔ 40)
When recording in the Cinema Mode, this indication is displayed.

❹ Digital Zoom (➔ 36)
When the Digital Zoom Function is activated, this indication is displayed.

Digital Effects (➔ 72)
When a digital effect is activated, the corresponding indication is displayed.



❺ Recording Speed Mode (➔ 24)
The selected Recording Speed Mode is displayed.
SP: Standard Mode
LP: Long-play Mode

❻ Tape Counter, Time Code (➔ 154, 162)
The Tape Counter, Memory Stop Function or Time Code indications is displayed.

❼ Zoom Magnification (➔ 36)
When you push the [W/T] Zoom Lever up or down, the Zoom Magnification Indication and the Zoom Gauge are displayed.

Recording Mode (➔ 30)

AUTO:	This appears when [MODE] is set to [AUTO] on the Menu.
MNL:	This appears when [MODE] is set to [MNL] on the Menu.

Super Image Stabilizer (➔ 42)

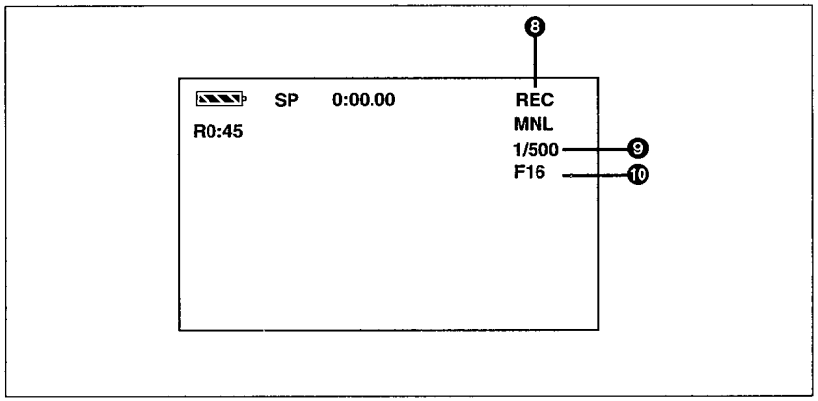
:	When the Super Image Stabilizer Function is activated, this indication is displayed.

Audio Recording Mode (➔ 88)

12bit/16bit:	The indication of the Audio Recording Mode that was selected for recording is displayed during playback.

All Photoshot Pictures Printing (➔ 112)

AUTOPRINT:	This indication is displayed when the Auto Print Function is being used.

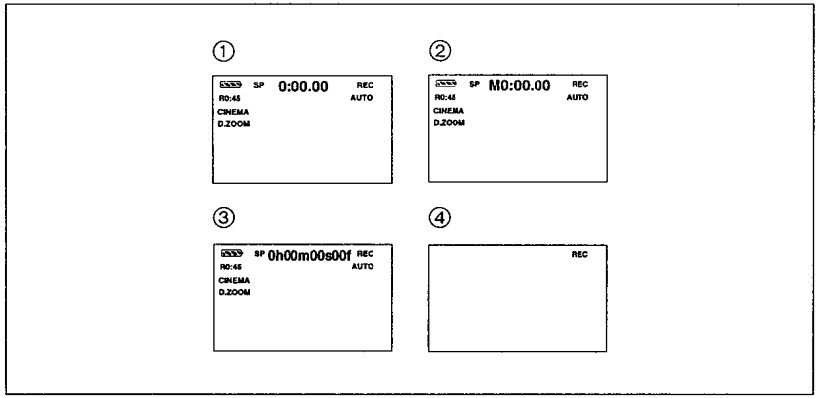


8 Tape Run Indications

REC:	Recording (➔ 30)
PAUSE:	Recording Pause (➔ 30)
▷:	Playback (➔ 44)/Camera Search in forward direction (➔ 56)
◁:	Camera Search in reverse direction (➔56)
▮▮:	Still playback (➔ 50)
▷▷:	Fast-forward/Cue playback (➔ 46)
◁◁:	Rewind/Review playback (➔ 44, 46)
▮▷ / ◁▮:	Slow playback in forward direction/ Slow playback in reverse direction (➔ 48)
▮▮▷ / ◁▮▮:	Still Advance playback in forward direction/Still Advance playback in reverse direction (➔ 50)
▷▷▮ / ▮◁◁:	Index Search in forward direction/ Index Search in reverse direction (➔ 62, 64)
CHK:	Recording check (➔ 32)
A.DUB▷:	Audio dubbing (➔ 88)
A.DUB ▮▮:	Audio dubbing pause (➔ 88)
PHOTO:	Recording in the Photoshot Mode (➔ 38)
BLANK:	Blank Search (➔ 58)
R▷:	Repeat playback (➔ 142)

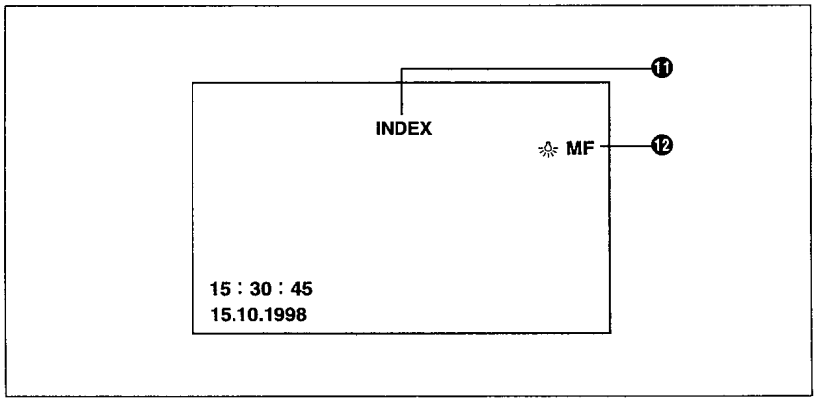
9 Shutter Speed
It appears when you manually adjust the shutter speed. (➔ 84)

10 Iris Value (F Number)/Gain-up Value
It appears when you manually adjust the iris and gain. (➔ 86)



Changing the Indications
By changing the setting for [DISPLAY] on the Menu (➔ 118-124) or by repeatedly pressing the [DISPLAY] Button on the Remote Controller (➔ 92), the Counter Display Mode can be changec in the order shown in the above illustrations ① to ④:

① Tape Counter Indication
② Tape Counter Indication with activated Memory Stop Indication
③ Time Code Indication
④ No Indication
(In this mode, only the Tape Run Indications, Warning/Alarm Indications, Date/Time Indications, Programme AE Mode Indications, MF Mode Indications, White Balance Mode Indications, and Zoom Magnification Indication can be displayed.)



11 Index (➔ 60)
INDEX: The [INDEX] Indication flashes for a few seconds while an index signal is being recorded.

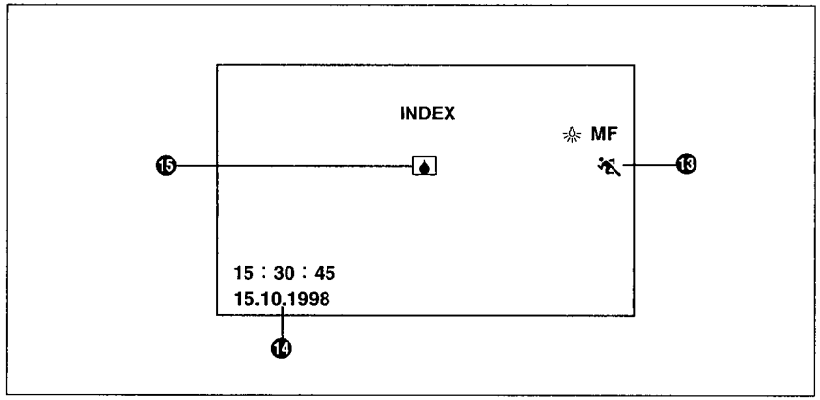
Search Number (➔ 64)
S1: The figure indicates which number of scene ahead from the present scene is to be played back.

12 Manual Focus (➔ 34)
If you select the Manual Focus Mode, the [MF] Indication is displayed.
When the Movie Camera is in the Auto Mode, this indication is not displayed.

White Balance Mode (➔ 80)
The White Balance Mode offers the following possible settings:

☼:	Indoor (incandescent Lamp) Mode
☀:	Outdoor Mode
🔒:	Lock Mode

When the Movie Camera is in the Auto Mode, none of the above 3 indications are displayed.



⑬ **Programme AE Mode (➔ 68)**
The Programme AE Function offers the following settings:
- : Sports Mode
- : Portrait Mode
- : Low Light Mode

⑭ **Date and Time (➔ 44)**
The time is indicated in the 24-hour system.

⑮ **Warning/Alarm**
When any of the following indications lights or flashes, confirm the condition of the Movie Camera.
- : Condensation has occurred. (➔ 136)
- : The erasure prevention slider of the inserted cassette is closed (set to [SAVE]).
  No cassette is inserted.
- : The built-in battery is discharged. (➔ 128)
- : The heads are dirty.
- END: During recording, the tape has reached its end.
- REMOTE: Wrong Remote Controller Mode is selected. (➔ 100)
- PRINTER ERROR: This indication is displayed if you set [AUTOPRINT] on the Menu to [ON] when no printer is connected to the Movie Camera.

Before Requesting Service (Problems & Solutions)

Power Supply

P1: The Movie Camera does not turn on.
S1: Is the Battery or the AC Adaptor connected correctly? Confirm the connection. (➔ 16)

P2: The Movie Camera has turned off automatically.
S2: If you leave the Movie Camera in the Recording Pause Mode for more than 6 minutes, it automatically switches off to protect the tape and to conserve battery power. (➔ 30)

P3: The Movie Camera quickly turns off.
S3-1: Is the Battery discharged? When the Remaining Battery Power Indication is flashing or the [ ] indication is displayed, the Battery is discharged. Charge the Battery or insert a fully charged Battery. (➔ 18, 156)
S3-2: Has condensation formed? If the Movie Camera is brought from a cold to a warm place, condensation may form inside. In this case, the Movie Camera automatically switches off and no operation can be performed except taking out the cassette. Wait until the Condensation Indication disappears. (➔ 136)

Battery

P1: The Battery discharges quickly.
S1-1: Is the Battery fully charged? Charge it until all 4 Charge Lamps on the AC Adaptor light. (➔ 18)
S1-2: Are you using the Battery in a place where the temperature is very low? The ambient temperature greatly influences the Battery's performance. Its operation time becomes shorter in a cold place. (➔ 138)
S1-3: Has the Battery reached the end of its service life? The service life of the Battery is limited. It depends on the way the Battery is used, but when the operation time even after proper charging is too short for normal use, the service life of the Battery has reached its end.

Normal Recording

P1: Recording cannot be started even though the Movie Camera is supplied with power and the cassette is inserted correctly.
S1-1: Is the erasure prevention slider of the cassette open? If it is open (set to [SAVE]), recording is not possible. (➔ 22)
S1-2: Has the tape reached its end? Insert a new cassette. (➔ 22)
S1-3: Is the Movie Camera turned on? (➔ 30)
S1-4: Is the [VCR] Lamp lit? If it is lit, recording is not possible. (➔ 44)
S1-5: Is the Condensation Indication [ ] displayed? When condensation has formed, no functions except taking out the cassette can be operated. Wait until the Condensation Indication disappears. (➔ 136)

Other Recording

P1: The picture in the Finder suddenly stands still for a few seconds.
S1-1: Did you press the [PHOTO SHOT] Button? If you press the [PHOTO SHOT] Button, a still picture is recorded for approximately 7 seconds. After approximately 7 seconds, the Movie Camera switches back to the Recording Pause Mode. (➔ 38)
S1-2: Did you press the Still Button [❚❚]? If you press the Still Button [❚❚], the picture stands still. Simply press this button again to return to the normal moving picture. (➔ 42)

P2: The Auto Focus Function does not work.
S2-1: Is the Manual Focus Mode selectec? If you select the Auto Focus Mode, the focus is adjusted automatically. (➔ 34)
S2-2: Is the recording subject or situation suitable for the Auto Focus Mode? The Auto Focus Function does not work correctly for some kinds of subjects and recording situations. In this case, use the Manual Focus Mode to adjust the focus. (➔ 148)

Editing

P1: Audio dubbing cannot be performed.
S1-1: Is the erasure prevention slider of the cassette open? If it is open (set to [SAVE]), editing is not possible. (➔ 22)
S1-2: Are you trying to edit parts of the tape recorded in the LP Mode? As the tracks recorded in the LP Mode are narrower than the heads, audio dubbing is not possible. (➔ 24)

Indications

P1: The Time Code becomes incorrect.
S1: In the Slow Motion Playback Mode in reverse direction, the counter of the Time Code Indication may not be stable, however, this is not a malfunction.

P2: The Remaining Tape Time Indication disappears.
S2: If you record a still picture in the Photoshot Mode, the Remaining Tape Time Indication disappears temporarily. However, if you switch the Movie Camera over to the Normal Recording Mode, it appears again.

P3: The Remaining Tape Time Indication does not match the actual remaining tape time.
S3-1: If scenes of less than 15 seconds are recorded successively, the remaining tape time is not indicated correctly.
S3-2: The Remaining Tape Time Indication may show a remaining tape time that is 2-3 minutes shorter than the actual remaining tape time.

Playback (Picture)

P1: No playback picture is reproduced when pressing the Play Button [▶].
S1: Did you press the [VCR/CAMERA] Button so that the [VCR] Lamp lights? When the [VCR] Lamp is not lit, no playback functions can be operated. (➔ 44)

P2: Mosaic-like patterns appear in the picture during Cue, Review or Slow Motion Playback.
S2: This phenomenon is a characteristic of the digital video system. This is not a malfunction. (➔ 46)

P3: I want to play back the picture on a TV.
S3: If you attach the Output Terminal Box [AV ONE TOUCH STATION] to the Movie Camera, you can connect the Movie Camera to a TV. (➔ 52)

P4: The Movie Camera is correctly connect to a TV, but no playback picture is reproduced.
S4: Did you select "Video Input" on the TV? Carefully read the operating instructions for your TV and select the channel that matches the input sockets used for connection.

P5: The playback picture is not reproduced clearly.
S5: Are the video heads on the Movie Camera dirty? If the video heads are dirty, the picture cannot be played back clearly.

Playback (Sound)

P1: Different sounds are played back together.
S1: Is [AUDIO OUT] set to [MIX] on the VCR Mode Menu? If you have performed audio dubbing on a cassette for which you set [AUDIO REC] to [12bit] for recording, the original sound and the sound dubbed with audio dubbing are played back together. It is also possible to play them back individually. (➔ 90)

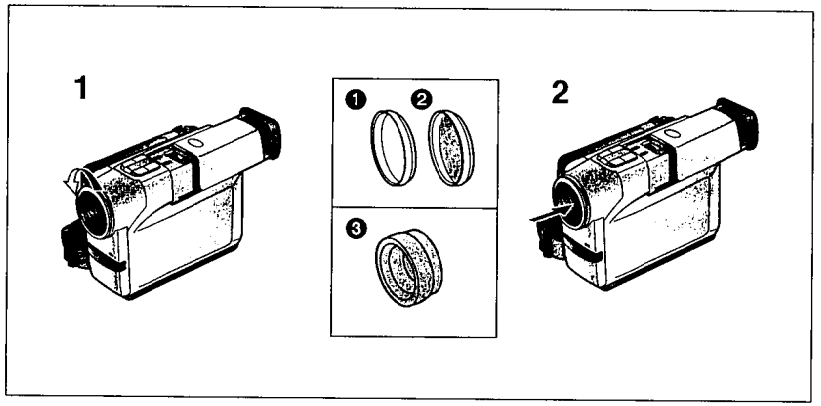
P2: The original sound was erased by performing audio dubbing.
S2: If you perform audio-dubbing on a recording made in the [16bit] Mode (➔ 83), the original sound is erased. If you want to keep the original sound, be sure to select the [12bit] Mode for the original recording.

Others

P1: The cassette cannot be taken out.
S1: Is the Movie Camera supplied with power? Is the AC Adaptor correctly connected or the Battery correctly inserted? To remove the cassette, the Movie Camera must be supplied with power, however, it is not necessary to set the [POWER ON/OFF] Switch to [ON].

P2: No operation except taking out the cassette can be performed.
S2: Is the Condensation Indication [💧] displayed? If condensation has formed inside the Movie Camera, it automatically switches off and prevents any operation except taking out the cassette. Wait until the Condensation Indication disappears. (➔ 136)

P3: The Remote Controller does not work.
S3-1: Is the button-type battery in the Remote Controller exhausted? If the Remote Controller does not work when you use it near the Remote Controller Sensor on the Movie Camera, the button-type battery is exhausted. Replace it with a new battery. (➔ 98)
S3-2: Is the correct Remote Controller Mode selected? If the Movie Camera's setting for [REMOTE] on the Menu and the mode selected on the Remote Controller are not matched, operating the Movie Camera with the Remote Controller is not possible and the [REMOTE] Indication is displayed. (➔ 100)

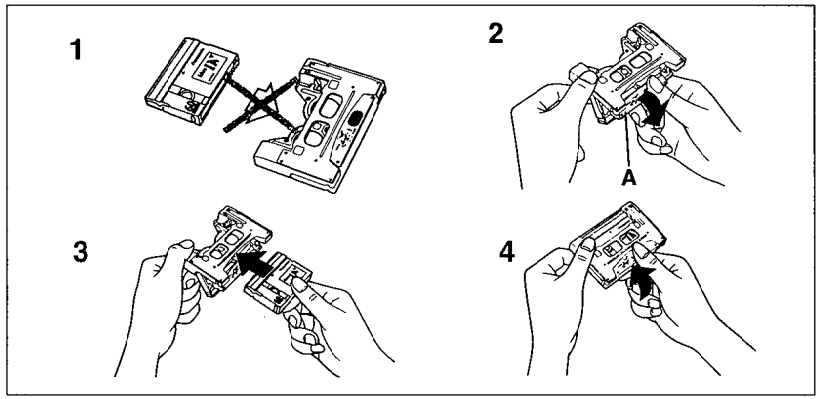


Filter Kit/Wide Conversion Lens

❶ ND Filter (ND8)
- This filter reduces the amount of light to approximately 1/8th but does not affect the colours.
- The depth of field is slightly reduced.
- White balance adjustment is possible even with either of these filters attached. However, when using the ND Filter and recording with Auto White Balance, the white balance adjustment may not be precise. Therefore, we recommend that you use the Manual White Balance Mode when recording with the ND Filter attached.
- When you record with a filter attached and zoom to the extreme wide-angle setting, the four corners of the picture may become dark (vignetting effect).

❷ MC Protector
- Since this filter neither affects the colours nor the amount of light, it can always be left attached to protect the Movie Camera's lens.
- It reduces invisible ultraviolet rays and prevents the picture from becoming bluish.

❸ Wide Conversion Lens
- Use the Wide Conversion Lens under bright lighting. (If used under insufficient lighting, the sharpness at the centre and near the edges of the picture may differ considerably.)
- When you record with the Wide Conversion Lens attached and zoom to the extreme wide-angle setting, the four corners of the picture may become dark (vignetting effect).



Cassette Adaptor

It can only be used with S cassettes bearing the DV mark.
It can only be used to play back DV cassettes which are recorded in "DV" format.

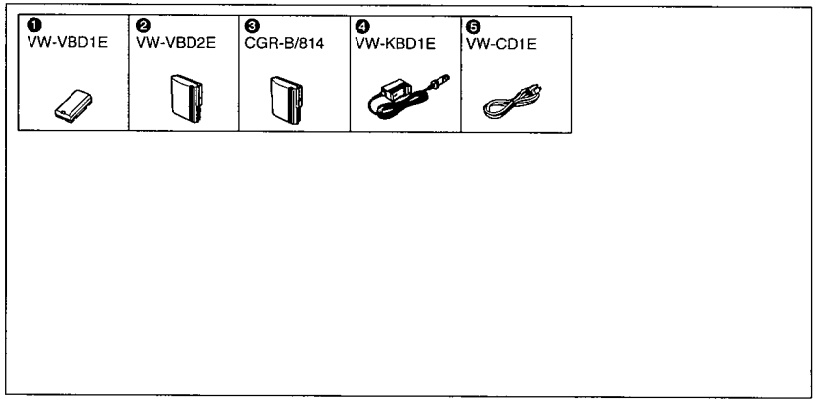
1 Take care to insert the cassette in the proper direction.

2 Open the Cassette Adaptor.

3 Insert the Cassette tape.

4 Close the Cassette Adaptor.

- Do not subject the cassette adaptor to strong shocks or vibration as it uses precision parts. Also, do not modify or disassemble the cassette adaptor. After use, remove the DV cassette and store it in its case.
- Do not push down A (rear door) using an unnecessarily large force.



Optional Accessories

❶ Battery Pack (Lithium)

❷ Battery Pack (Lithium, Large Capacity)

❸ Battery Pack (Lithium, Large Capacity)

❹ Car Battery Charger

❺ DV Cable

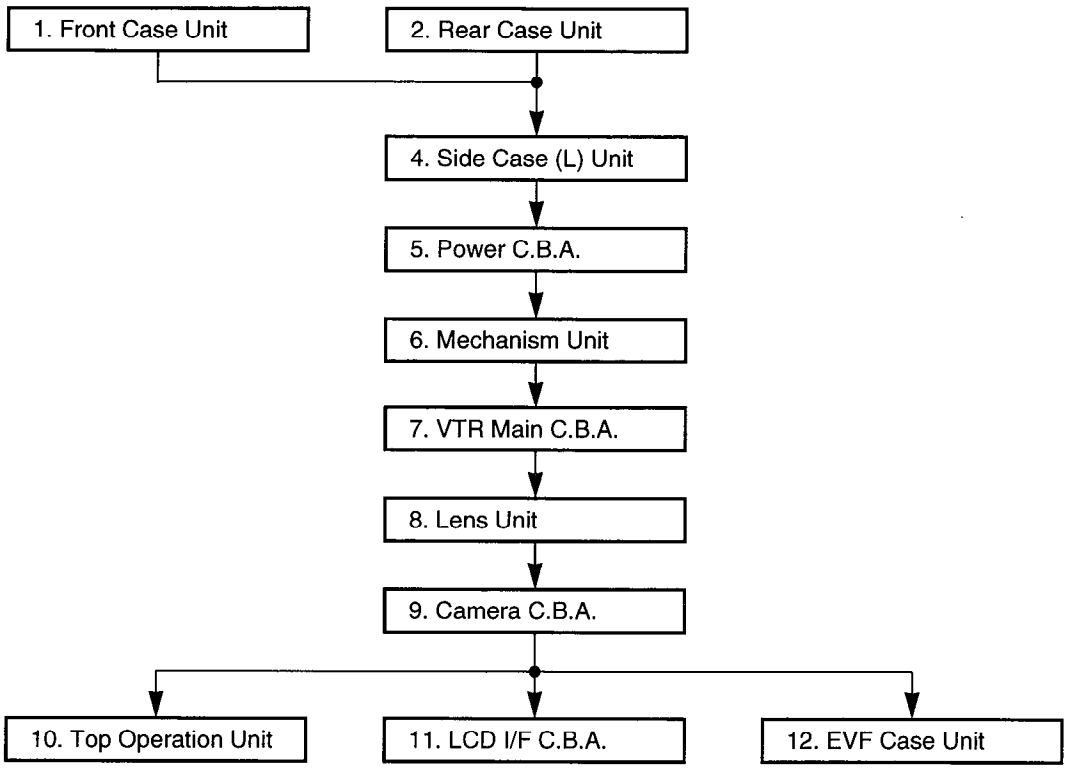
- Some accessories are not available in some countries.

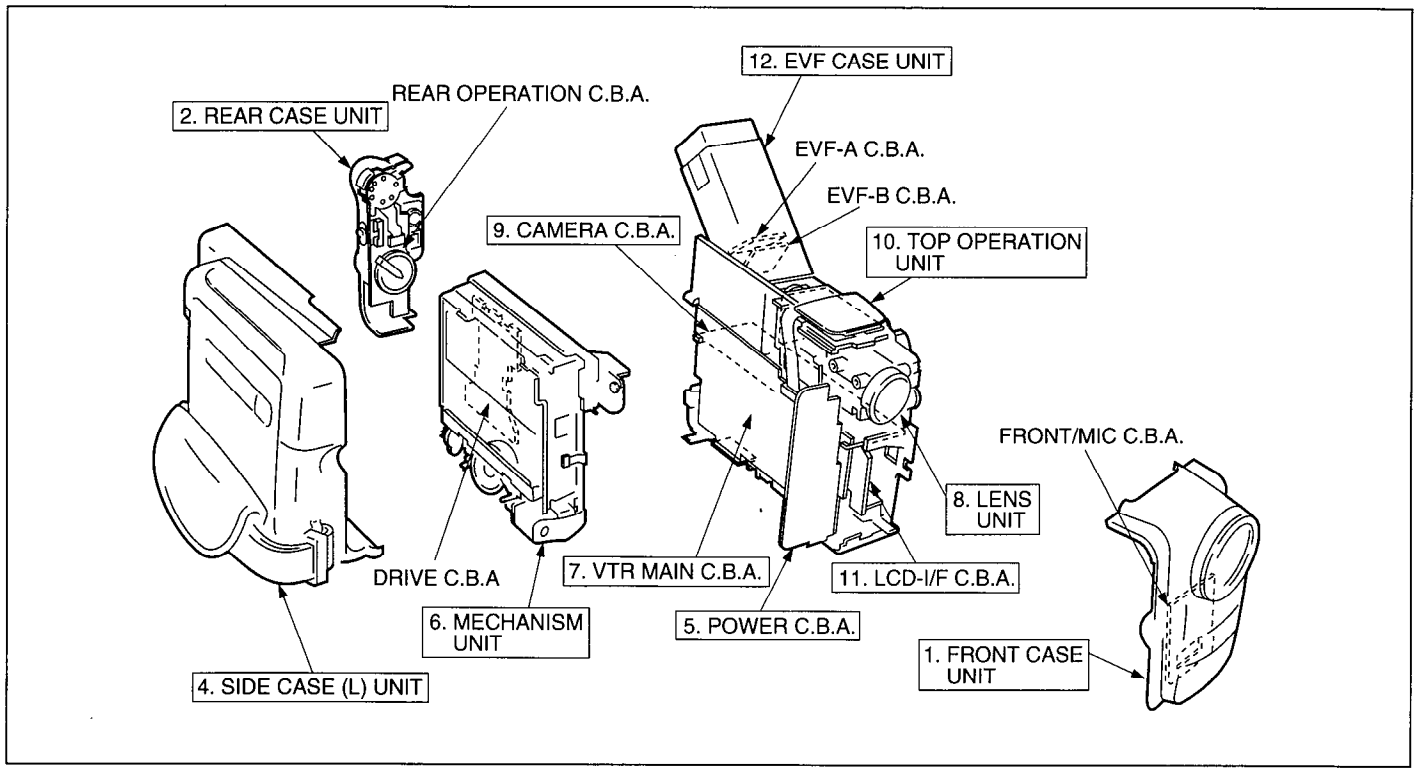
Memo

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLE FLOW CHART

This flow chart indicates the disassembly steps the cabinet parts, C.B.A. and Mechanism Unit in order to access to items to be serviced. When reinstalling, perform the steps in the reverse order.





2-2. DISASSEMBLY PROCEDURES

Flow-chart Disassembly procedure

No.	ITEM / PART	FIG.	REMOVAL (SCREW)	NOTE
1	FRONT CASE	Fig. 1	3-SCREWS (A) 1-SCREW (B) 2-LOCKING TABS 1-CONNECTOR	
		Fig. 2	3-SCREWS (A)	Not for AG-EZ10
		Fig. 3	2-SCREWS (B) 2-LOCKING TABS 1-CONNECTOR	Not for AG-EZ10
2	REAR CASE	Fig. 4	2-SCREWS (C) 2-SCREWS (D) 2-SCREWS (E) / (F) 1-CONNECTOR (FP6701)	
3	LCD UNIT	Fig. 5	2-SCREWS (G) 2-CONNECTORS (FP3502, FP3503)	Not for AG-EZ10
		Fig. 6	3-SCREWS (H) 2-SCREWS (I)	Not for AG-EZ10
4	SIDE CASE (L) UNIT	Fig. 7	3-SCREWS (J) SCREW CAP / 2-SCREWS (K) 2-LOCKING TABS 2-SCREWS (L) 1-SCREW (M)	
		Fig. 8	2-SCREWS (N) / (O)	
5	POWER C.B.A.	Fig. 9	2-SCREWS (P) / (Q) 2-CONNECTORS (FP1001, PP1001)	
6	MECHANISM UNIT	Fig. 10	1-SCREW (R) 2-SCREWS (S) 1-SCREW (T) 2-CONNECTORS (PP2001, FP3201)	
		Fig. 11	2-SCREWS (U)	
7	VTR MAIN C.B.A.	Fig. 12	2-SCREWS (V) 3-CONNECTORS (P3001, PP3002, FP6001)	
8	LENS UNIT	Fig. 12	2-SCREWS (W)	
9	CAMERA C.B.A.	Fig. 13	3-CONNECTORS (PP301, PP302, FP701)	
10	TOP OPERATION UNIT	Fig. 14	2-SCREWS (X) 2-SCREWS (Y) 1-SCREW (Z)	
11	LCD I/F C.B.A.	Fig. 15	2-SCREWS (a) 2-SCREWS (b) 1-SCREW (c)	Not for AG-EZ10
12	EVF CASE UNIT	Fig. 16	UNLOCK Unlock Locking Tab with a small driver.	
		Fig. 17	2-SCREWS (d)	

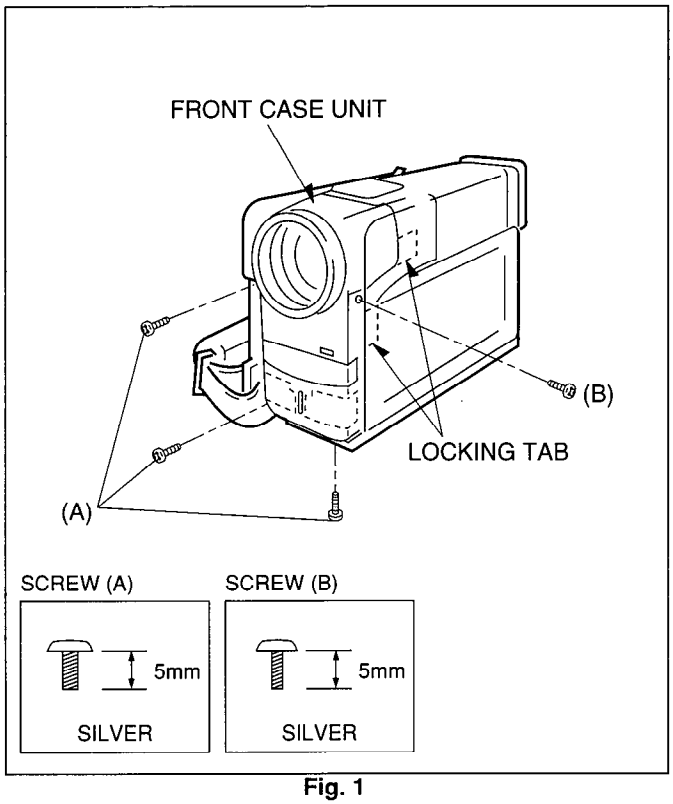


Fig. 1

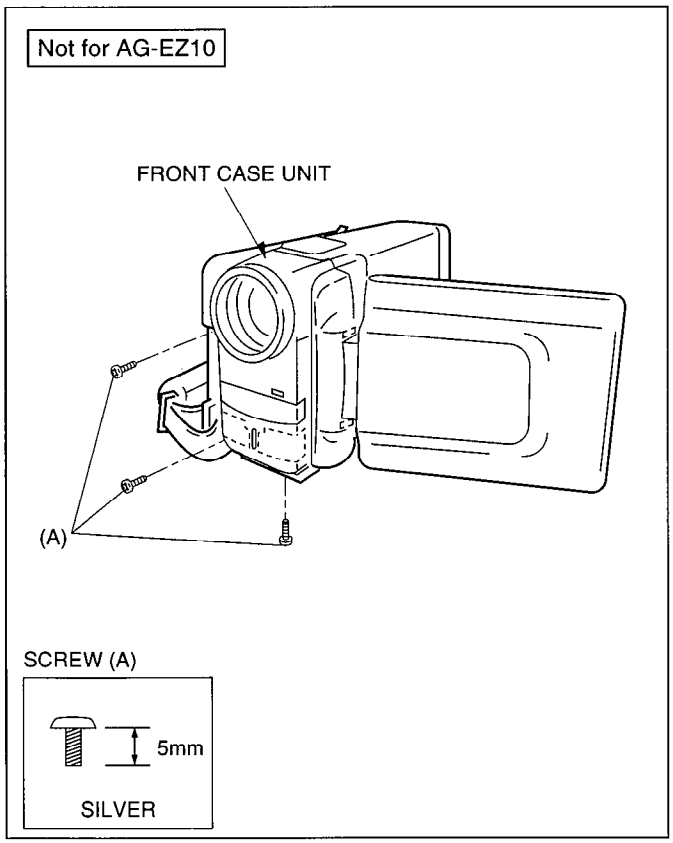


Fig. 2

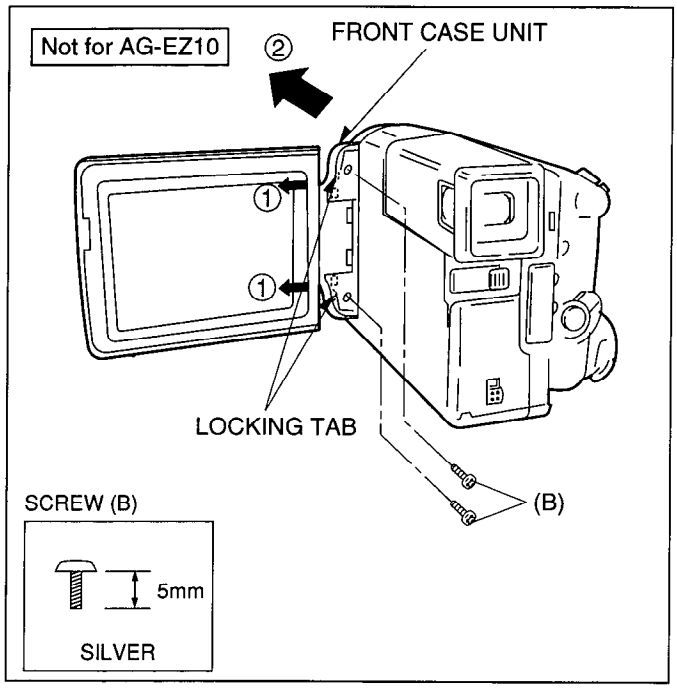
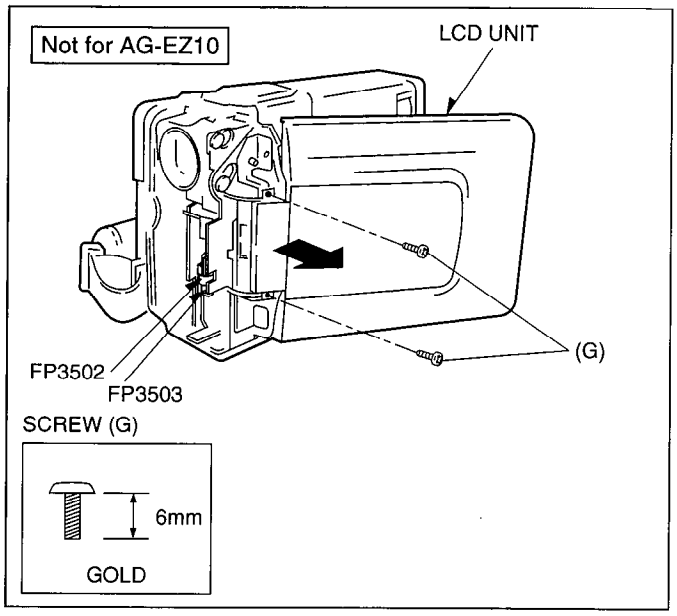


Fig. 3



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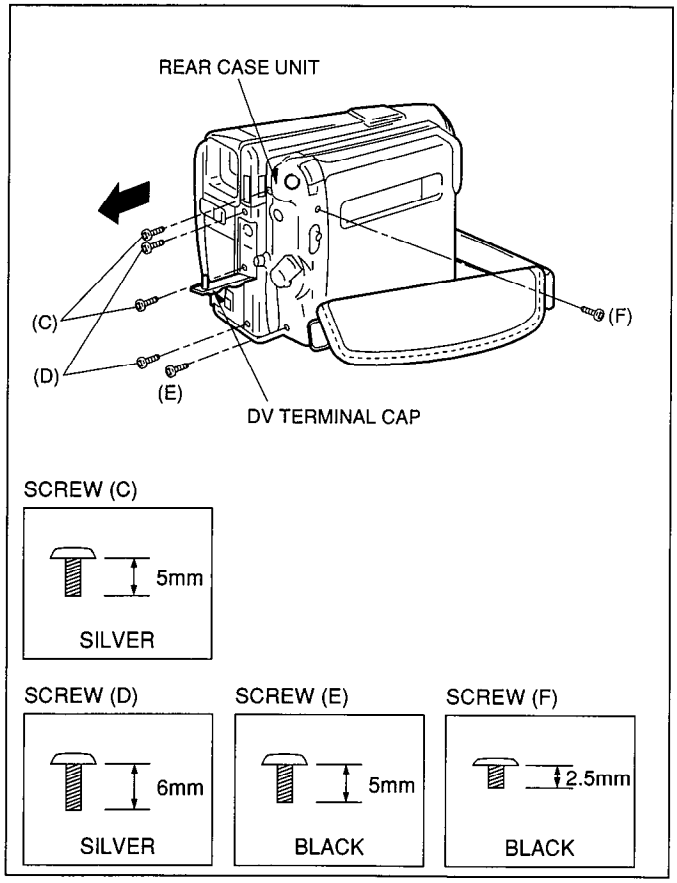

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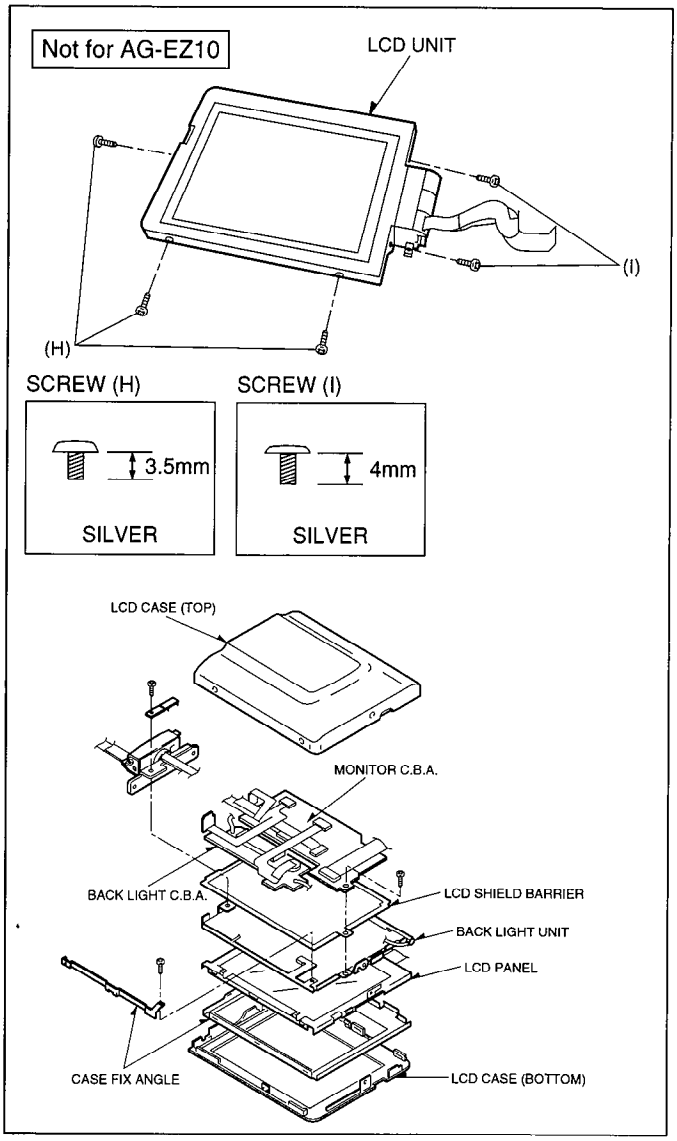

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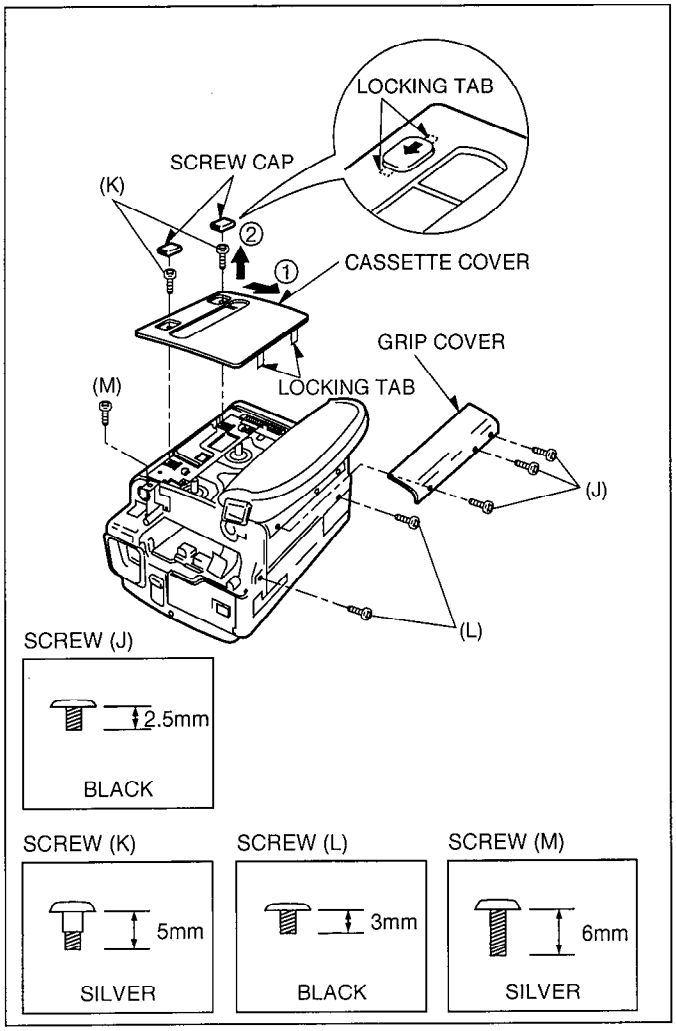

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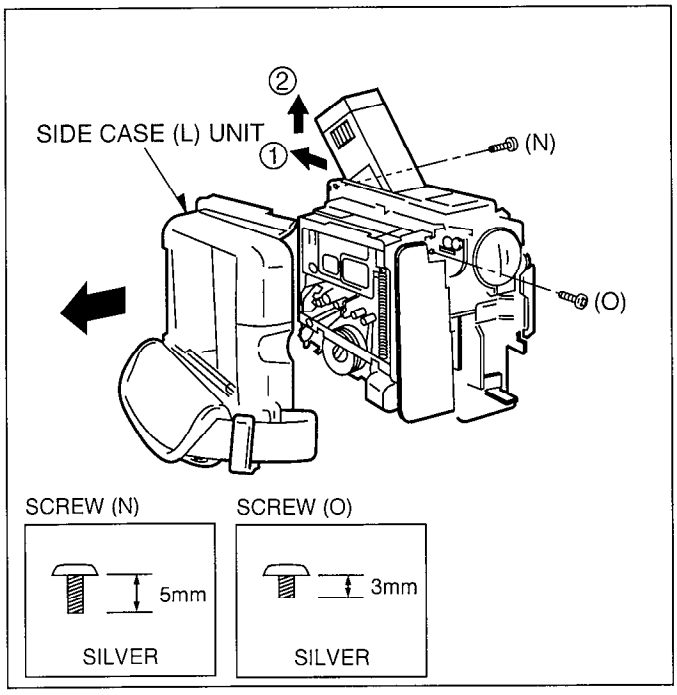

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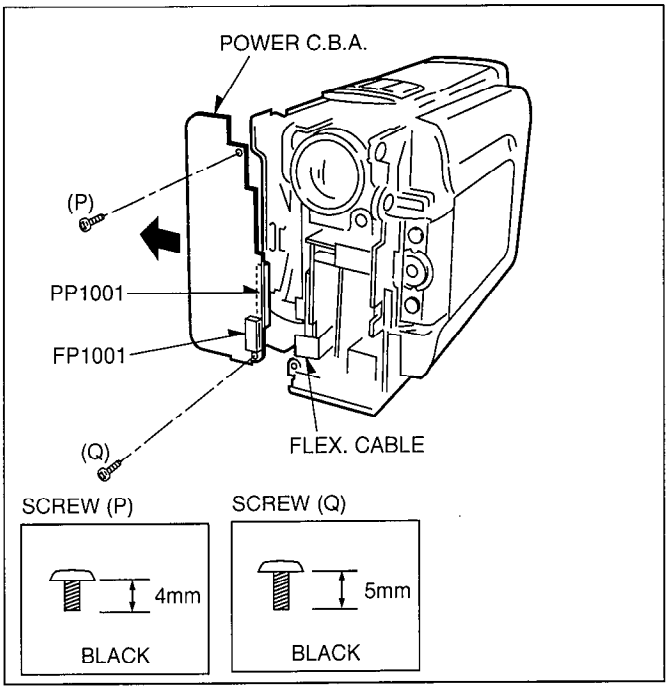

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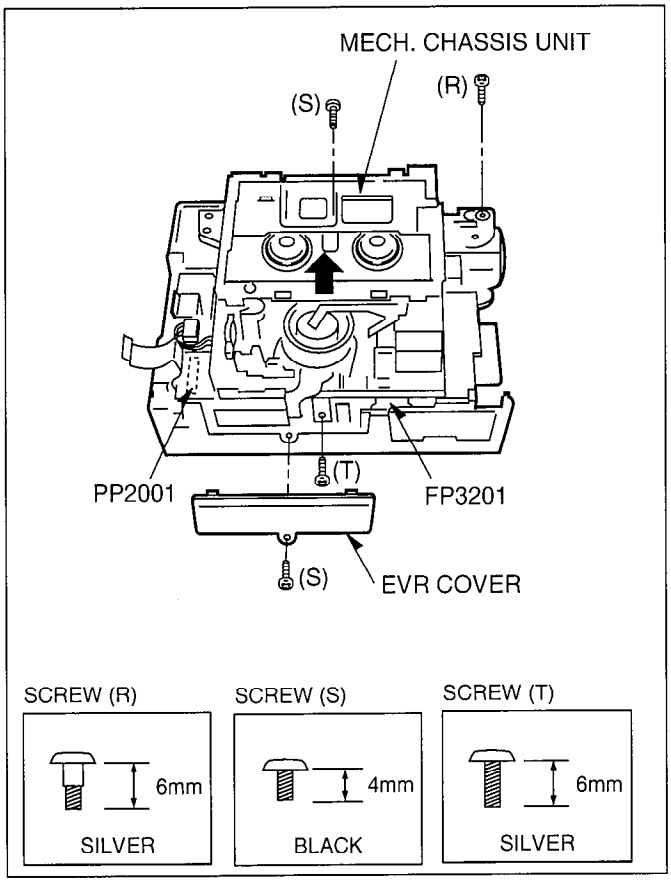


Fig. 10

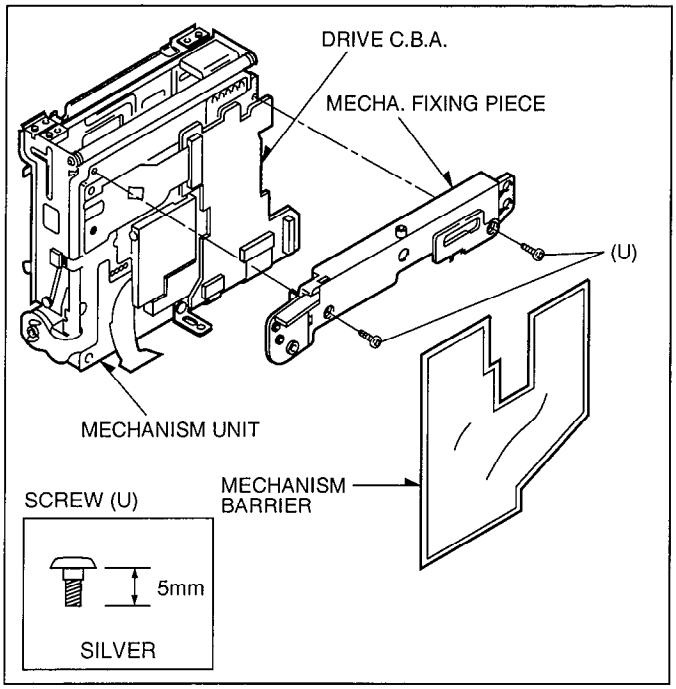
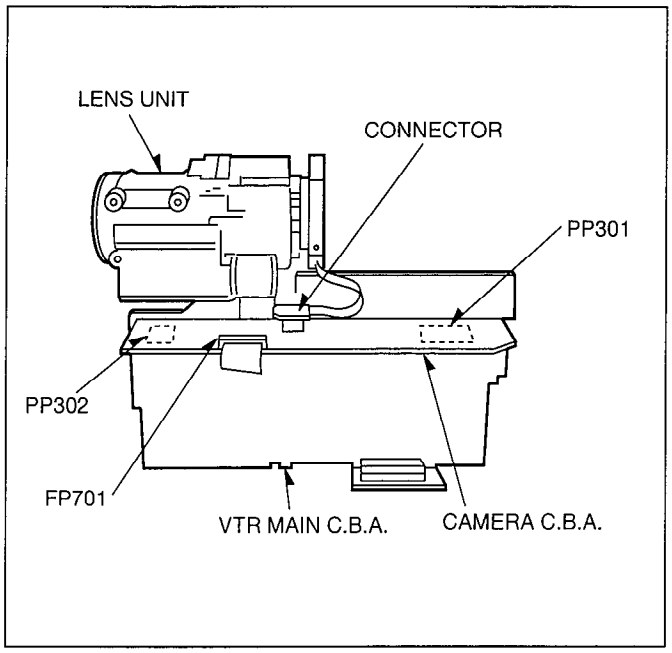


Fig. 11



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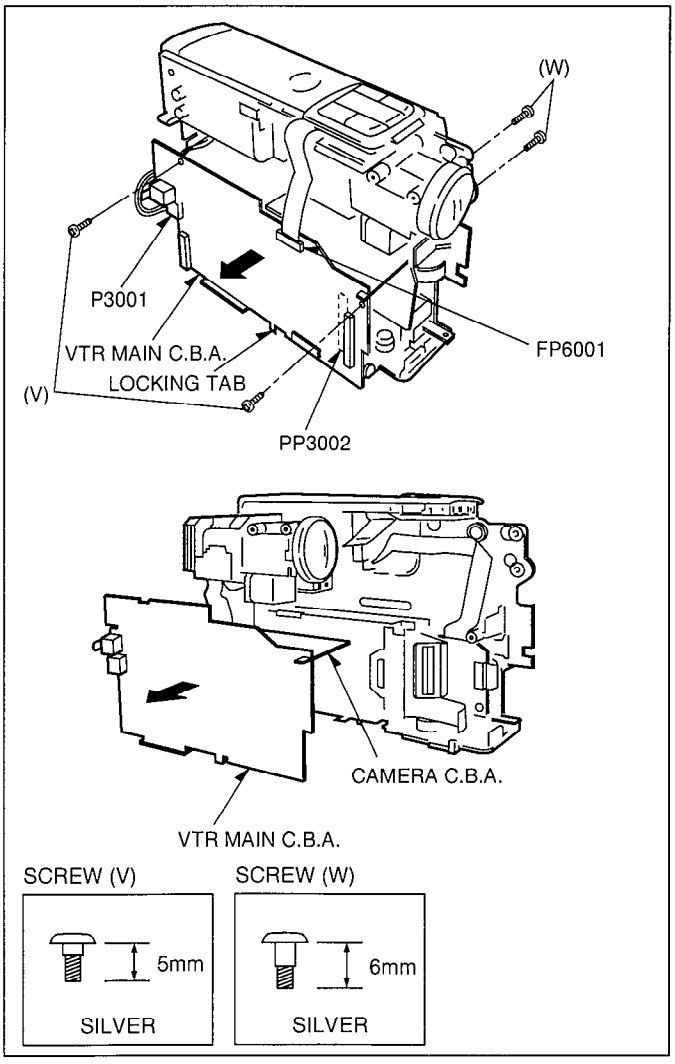

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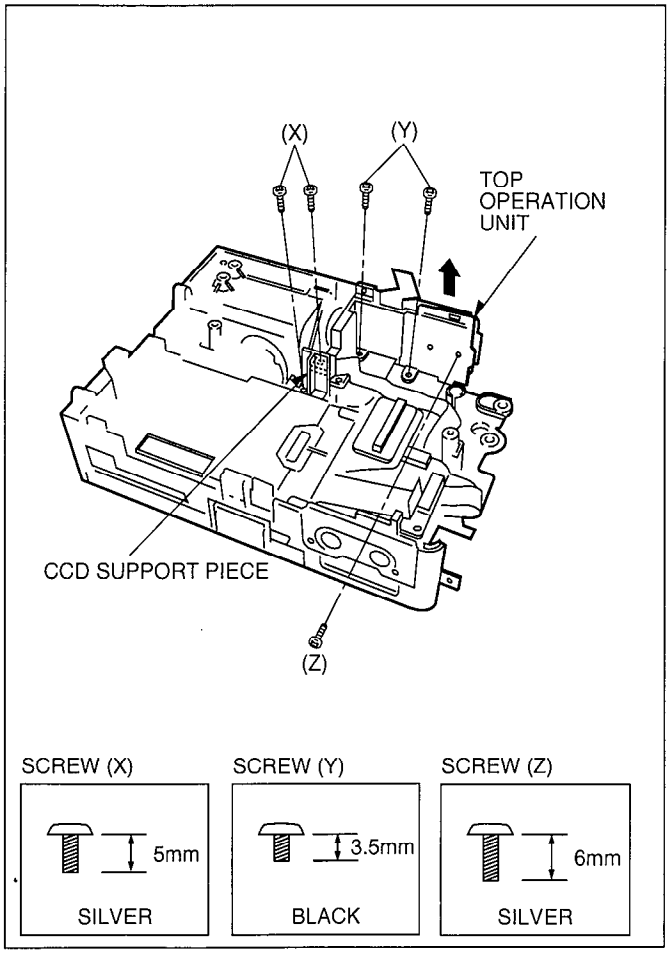
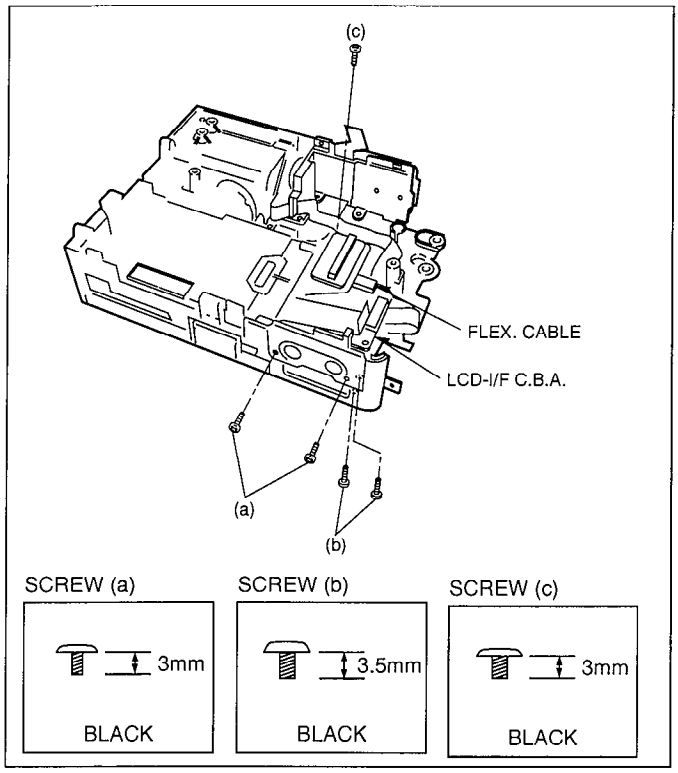


Fig. 14



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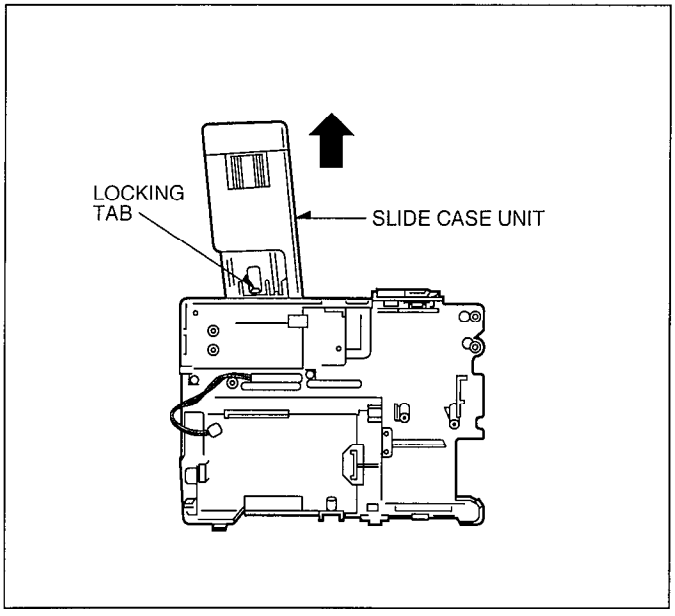


Fig. 16

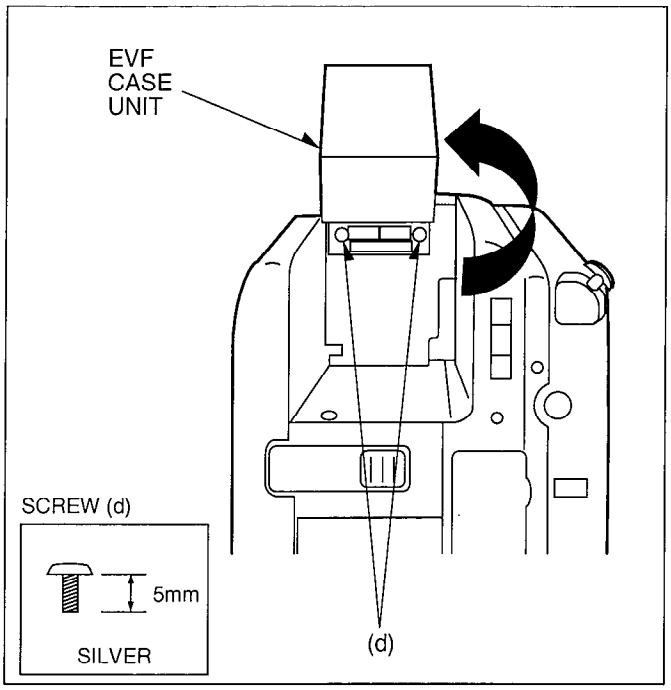


Fig. 17

SECTION 3
BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS

3-1. ABBREVIATIONS

	INITIAL/LOGO	ABBREVIATIONS
A	A.TR	Auto Tracking
	AB0-4, AB12-15	Address Bus Line 0-4, 12-15
	ABSF	Focus Encoder Input
	ACI	Analog Channel Cording IC
	AD	Auto Date, Analogue Digital Converter
	AD0-6, ADR0-6	Address Data Line
	ADCLK	Analogue Digital Converter Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	A-DET	Audio Detect
	ADREC	Audio Delaied Rec
	ADUB	Audio Dubbing
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEE (H)	Audio E-E (H)
	AEH	Audio Erase Head
	AEIRQ	Auto Expose Interrupt Request
	AF/MF	Auto Focus/Manual Focus
	AF DIS CS	AF DIS Chip Select
	AFADE	Audio Fade
	A-FADE (L)	Audio Fade (L)
	AFCS	Auto Focus Chip Select
	AF-VN	Zoom Encoder V-Ref (−)
	AF-VP	Zoom Encoder V-Ref (+)
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	AGND	Analogue Ground/Audio Ground
	AGS	Anti Ground Shooting
	AH (P) / (R)	Audio Head (Play) / (Record)
	AHASW	Audio Head Amp Switch Pulse
	AHSW	Audio Head Switch Pulse
	AI, AO	Buffer Input, Output
	AIBCK	Bit Clock (to A/D Converter)
	AIDAT	Serial data (to A/D Converter)
	AILRCK	L/R Clock (to A/D Converter)
	AIMCK	Master Clock (to A/D Converter)
	ALC CNT	Auto Level Control Control
	ALC MAIN	Auto Level Control Drive
	A-LOCK	Full Auto Switch
	AMUT	Audio Mute
	A-MUT (H)	Audio Mute (H)
	ANLPTH	Analogue Loop Through High
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	APS	Auto Power Save
	ART VH	Artifical Vertical Sync
	AT CNT	Automatic Tracking Gain Adjust
	ATF	Automatic Track Finding
	ATFCLK	41.85MHz
	ATL	Auto Lock Select
	ATN	Absolute Track Number
	ATR OFF (H)	Auto Tracking Off (H)
	ATV	Advanced TV
	AUDIO (N)	Audio (Normal)
	AUX	Auxiliary
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	B/G OFF	AWT B-Offset Voltage
	BACK	Back-up
	BACK UP	Microcomputer Back-up
	BACK VDD	Back-up Power
	BATT	Battery
	BATT ALARM	Battery Alarm
	BATT REF	Reference Voltage for Battery
	BCB	B Carrier Balance
	BCBM (B-Y)	B-Y Carrier Balance
	BCBM (R-Y)	R-Y Carrier Balance
	BD 0-7	Bus Data
	BDCK	Standerd Bus Data Clock (9MHz)
	BDEN	Standerd Bus Data Enable
	BF	Burst Flag
	BFA	Burst Flug for Encoder
	BFO/BFI	Burst Flug Input/Output
	BI, BO	Buffer Input, Output
	BL	Back Light
	BL ON	Back Light ON (L)
	BL4V	Back Light 4V
	BLC 0, 1	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input/Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encoder
	BLKI/O	Blanking Pulse In/Out
	BLKZ	Blanking Pulse for Zoom
	BM	Balance Modulator
	BQUIET	Bus Data Quite
	B-Y KB	B-Y Carrier Balance
	B-YO	B-Y Signal Out
C	C A In/Out	Pre-Aperture In/Out
	C CNT	Colour Control
	C SYNC	Composite Sync Signal
	C/N	Carrier/Noise
	C0-7, C00-07	Chrominance Signal 0-7
	CAGAIN	Aperture Gain Control
	CAM	Camera
	CAM CLK	Camera Clock
	CAM RST	Camera Reset

INITIAL/LOGO	ABBREVIATIONS
CAM SIOC	Camera Serial In/Out Control
CAM T	Camera Test
CAM TL	Capstan Trque Limit
CAP EC	Capstan Trque Control
CAP P (H)	Capstan Power On (H)
CAP R/F/S	Capstan Revers (H) /Stop (M) /Forward (L)
CAP SW	Capstan Power Control Switch
CAPSTP H	Capstan Stop Flag (Stop High)
CAPVM	Capstan Motor Current
CAPVS	Capstan Motor Power Control Switch
CAS	Compresion, Audio Process, Shuffling/Deshuffling
CAS	Memory Address Strobe (Active Low)
CASDOWN, DWN	Cassette Down (L)
CBLK	Composite Blanking Pulse
CC	Channel Cording
CCA	Current Control Amp
CCD	Charge Coupled Devise
CCW	Counterclockwise
CD SP0-7	Digital Chrominance 0-7
CDS	Correlate Double Sampling Signal
CDS OUT	CCD Output Signal
CDS1,2	Sampling Pulse for CCD Output signal
CE	Control Pulse Erase
CEC	Capstan Error Code
C-ERA (H)	Control Erase (H)
CFEM	Chrominance Memory Signal
CFM	Chrominance Field Memory
CG CLK	Character Generator Clock
CG DATA	Character Generator Data
CGC	Chrominance Gain Control
CH	Charge
CH1	Channel 1 (Odd Field)
CHR	Character
CHR BACK	Character Back-up
CHR MIX	Character Mix
CI, CO	Buffer In/Out
CIF, CIR	Positive Control Pulse, Negative Control Pulse
CK	Clock
CL/CLK	Clock
CLASS	Classeffication Signal for Compress (DCT/VLC)
CLK135	13.5 MHz System Clock
CLK18	18 MHz System Clock
CLK2	Clock 2 (824XFH : 12.875 MHz)
CLK27	27 MHz System Clock
CLX, CLX1-4	Shift Clock for X Direction (LCD Panel)
CLY	Shift Clock for Y Direction (LCD Panel)
CLY FG	Cylinder FG Signal
CMEM0-3	Chrominance Memory 0-3
CMIX	Character Mix
CMO	Chrominance Memory Output
CMODE	Camera Mode
CNCLK	Clock
CNR	Chrominance Noise Reduction
CNT, CONT	Control
CO	Control Out
CO0-7	Chrominance Output 0 to 7 (Digital)
COM	Common
COMB	Comb Filter
COS EQ	Cosine Equalizer
CP	Clamp Pulse
CP ON (H)	Camera Power On (H)
CP2, 20	Clamp Pulse
CPN	Component Signal
CPOB	Clamp Pulse for Optical Blanking
CPS	Composite Signal
CR OUT	Pre-Aperture Out
CR POW SW	Camera Remote Power On Switch
CRA	Aperture Gain Control
CRST	Camera Reset
CS	Chip Select
CS 0-7	Chrominance Signal Out 0-7
CSEL	Clock Phase Select
CSI 0-7	Chrominance Signal In 0-7
CTSW	Crosstalk Switch
CURR	Current
CW	Clockwise
CYL EC	Cylinder Motor Trque Control
CYL PG	Cylinder Motor PG
CYL VM	Cylinder Motor Current or Power
D CLK	Digital Clock
D MODE	Digital Mode Switch Signal
D01-03	Zoom 01-03
DAC	Digital Analogue Converter
DAG	Digital Analogue Ground
DB0-7	Data 0-7
DCC	DC Clamp Control
DCCNT	DC Control
DCI	Digital Channel Cording IC
DCLR	Digital Clear
DCP	Digital Clamp Pulse
DCT	Discrete Cosine Transform (Compression)
DCX7	Serial Data
DEDP 0-3	Playback Data
DEDR 0-3	Rec Data
DEMP	De-Emphasis
DFD0-7	Encode Input/Output Signal for Shuffling Memory
DIBDCK	Bit Clock
DICLK	Digital Clock
DIDAT	Serial Data
DILRCK	L/R Clock
DIMCK	Master Clock
DIOS	Select Signal for Digital In/Out
DIS	Digital Image Stabilizer
DIS R/B	Digital Image Stabilizer Read (H) /Busy (L)
DIS/KAND	Digital Image Stabilizer/Sensitivity
DISCS	Dis Chip Select
DISP	Display

INITIAL/LOGO		ABBREVIATIONS
	DL	Delay Line
	DOBCK	Bit Clock (to D/A Converter)
	DOCTL	Data Output Control
	DODAT	Serial Data (to D/A Converter)
	DOLRCK	L/R Clock (to D/A Converter)
	DOMCK	Master Clock (to D/A Converter)
	DQ 1-16	Memory Data
	DRK	Dark (LPF Switch for Auto Focus)
	DS	Double Sampling Pulse
	DS1, 2	Double Sampling Pulse
	DSF 0-7	Input/Output Data to Shuffling Memory (18 MHz)
	DSP	Digital Signal Processor
	DSV	Digital Sum Variation
	DV	Digital Video
	DVB	Digital Video Broadcast
	DVC	Digital Video Cassette
	DVDD	Digital VDD
	DVIO	Digital Video Input Output
	DVSS	Digital Ground
	DX	Shift Data for X Direction (for LCD)
	DY	Shift Data for Y Direction (for LCD)
	DZ	Digital Zoom
E	E Snap	Electric Snap Shot
	E ZM	Electric Zoom
	E2P	EEPROM
	EARP	Earphone
	EC	Error Control
	EC	Torque Control
	ECC	Error Correction Cording
	ECM	Electric Condencer Mic
	ECR	Reference Voltage for Capstan Torque
	EDA	Error Correction, DCI, ATF Servo
	EE CS	EEPROM Chip Select
	EE R/B	EEPROM Read (H) /Busy (L)
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer (DIS)
	ENV	Enverope
	EOB	End Of Block
	EQ	Equalizer
	EVF	Electric View Finder
	EXT DC	External DC (AC Adaptor)
	EXT DC (H)	AC Adaptor DC (H)
	EXT NOREG	AC Adaptor 6V
	EXT S DATA	Serial Data for Edit
	EXT SCK	Serial Clock for Edit
	EZOOM	Electric Zoom
F	F	Far (Focus)
	F ENC	Lens F-Value
	FACT MODE	Factry Mode (not used in the service)
	FB	Feed Back
	FC	Saw Tooth Signal In
	FCK	Clock

INITIAL/LOGO		ABBREVIATIONS
	FCO	Saw Tooth Signal Generator
	FENC	Focus Encoder
	FEND	Frame End Pulse
	FH2B	FH/2 (15.625 KHz/2 = 7.8125 KHz)
	FIX OSD	Auto Tracking Off (H)
	FM	Field Memory
	FM0-7	Field Memory 0 - 7
	FMCI0-3	Field Memory Chrominance In 0-3
	FMCO0-3	Field Memory Chrominance Out 0-4
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable
	FMT1-4	Focus Motor Terminal 1-4
	FMY00-07	Field Memory Luminance Out 0-7
	FMYI0-07	Field Memory Luminance In 0-7
	FNO	F Value
	FPS	Frame Refference Signal
	FR	Capstan Reverse High
	FRP	Frame Refference Pulse
	FRP	Frame Start Pulse
	FRPSO	Frame Start Pulse
G	G1,G2,G3	Gap 1, 2 and 3
	GCA	Gain Control AMP
	GCNT	Gain Control
	G-CNT	AGC Adjustment
	GCTRL	Gain Control
	GENE	Generator
	GF	FG AMP Terminal
	GSW	Ground for Switching Power
H	H/M/N	Hi-Fi/Mix/Normal
	H/N	Hi-Fi/Normal
	H1,2	H. CCD Drive Pulse
	HAP	Horizontal Aperture
	HASW	Head AMP Switching Pulse
	HB	Hall Bias
	HBR SET	High Brightness Set
	HBRST	High Brightness Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HG	Hall Gain
	HID	Head Switching Pulse
	HLT	High Bright Signal
	HOLE IN (+) , (−)	Input Signal from Hall IC
	HP	Headphone
	HPF	High Pass Filter
	HSE	Modulated Data Output
	HSS	Horizontal Sinc Signal
	HSW	Head Switching Pulse
	HS-WT	High Speed Zoom

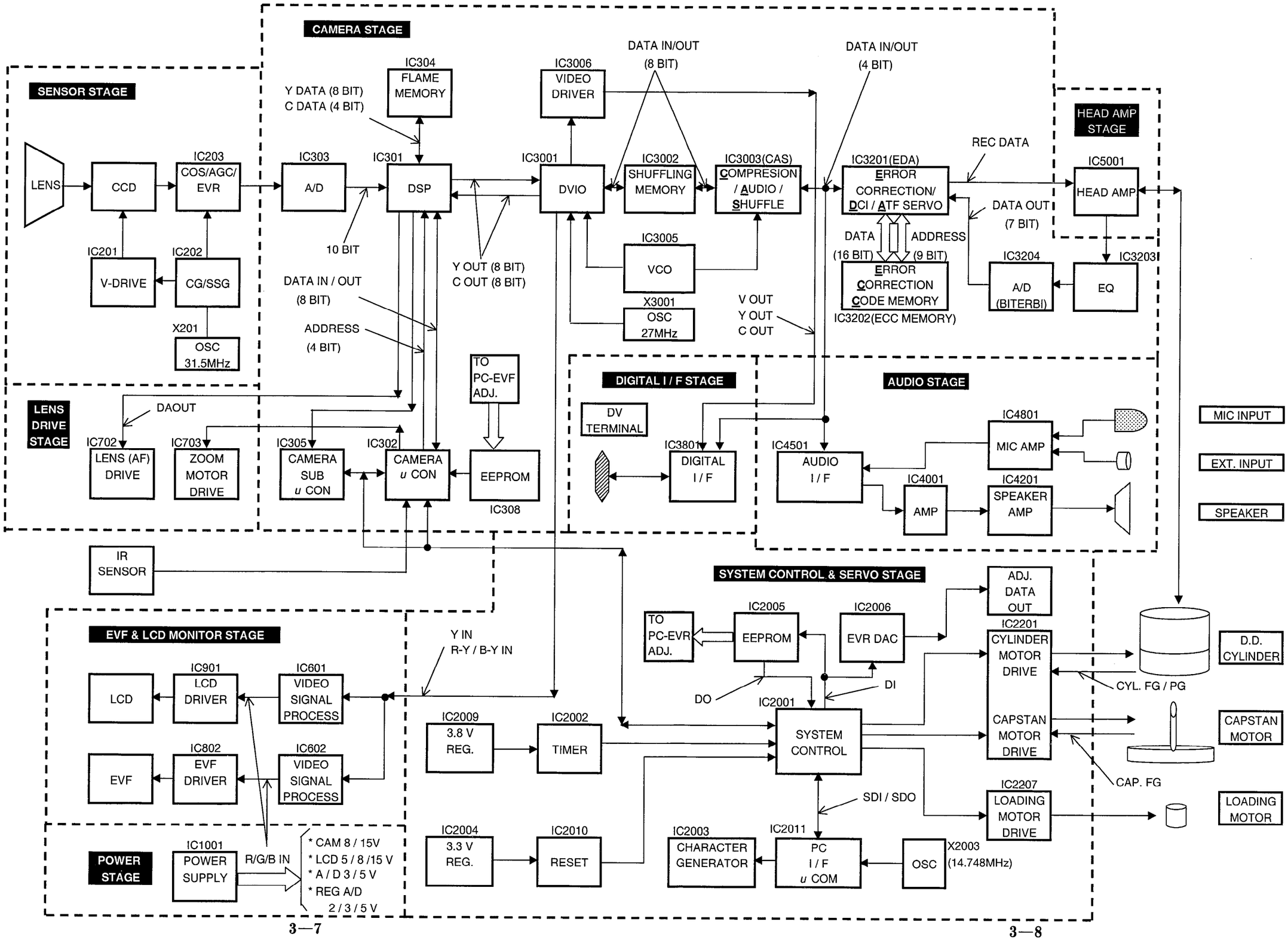
	INITIAL/LOGO	ABBREVIATIONS
	HSZ	High Speed Zoom
I	I/F	Interface
	I-2 C	Inter Integrated Circuit
	ID (H)	Wide Television (H)
	IMP	Inter Microprocessor Protocol
	INF	Input Frame Signal
	INF	CCD Input Signal 1
	INS	CCD Input Signal 2
	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOV	B-Y Analogue Signal Output
	IOY	Y Analogue Signal Output
	IR	Infrared Rays
	IRDET	Infrared Rays Detection
	IREF	Current Adjustment Terminal
	IRIS/SH	Iris/Shutter Control
	IRQ	Interrupt Request
	ITI	Insert & Track Information
J	JPEG	Joint Photographoc Image Cording Experts Group
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KEY IN	Key Scan
	KND	Digital Gain Up
	KNEE	Luminance Compensate
L	LCD	Liquid Crystal Display
	LCD P (L)	LCD Power On (L)
	LD	Load Pulse
	LDD	Liquid Direct Drive
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LOAD F, R	Loading Direction (F:Forward/R:Reverse)
	LPF	Low Pass Filter
	LRMONO	Monoral Audio (L + R)
	LSB	Least Significant Bit
	LVL	LPF Switch for Auto Focus
M	MA0-5	Microprocessor Address Data 0-5
	M1-3	Motor Coil Terminal 1 to 3
	Mbps	Megahertz Bit Per Second
	MD	Modulation
	MD0-7	Microprocessor Data 0-7
	MDT0-7	Microprocessor Data 0-7
	ME (TAPE)	Metal Evaporated (Tape)
	MENB	Focus Motor Enable
	MFF	Manual Focus Far
	MFN	Manual Focus Near
	MHSYNC	Monitor Horizontal Sync Signal
	MIC	Memory In Cassette
	MIG	Metal In Gap
	MIX N.R.D.	Non Rec Data Mix
	MOD	Modulation
	MOUT	Mic Out
	MP (TAPE)	Metal Particle (Tape)
	MPEG	Moving Picture Image Cording Experts Group
	MPEG2	Moving Picture Image Cording Experts Group Phase 2
	MRST	Focus Motor Reset
	MSB	Most Signal Bit
	MVSYNC	Monitor Vertical Sync Signal
N	N	Near (Focus)
	N/F	Near/Far Focus
	N/P	NTSC/PAL
	NB1-3	Base for NPN Transistor
	NC	No Connection
	NC1-3	Corrector of NPN Transistor
	NCLR	Power On Reset
	NCP1	Clamp Pulse
	NCP2+VDH	Clamp Pulse + Horizontal Drive Pulse
	NCP2+VDM	Clamp Pulse + Gate Pulse
	NDE	Non Liner De-Emphasis
	NE	Emitor of NPN Transistor
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	Non Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRE	Read Enable Input (Low Active)
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OBREF	Reference Voltage for Optical Black Control
	OE	Output Enable
	OFH	Horizontal Counted Down Clock Signal (Reference)
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
	OZ	Optical Zoom
P	PB1-3	PNP Base 1-3
	P SW	Power Switch
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	Corrector of PNP Transistor
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hall AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control

INITIAL/LOGO		ABBREVIATIONS
	PCV	Phase Compensator (Voltage)
	PE	Emitter of PNP Transistor
	PED	Pedestal
	PEDECNT	Pedestal Control
	PENO	Alarm (L)
	PFP	Pilot Frame Position
	PGA, B	Power Ground A, B
	PGC	Pulse Generator Comparator
	PGI	Pulse Generator Input
	PGMM	Pulse Generator Monostable Multivibrator
	PGO	Output of Pulse Generator AMP
	PMODE	Select Signal for Normal/Wide Screen
	PON	Power On
	POR	Power On Reset
	POSCOM	Common Position
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
Q	Q2H	Source Output Select
R	R CTL P	Recorded Control Pulse (+)
	R CTL R	Recorded Control Pulse (-)
	R/B	Read/Busy
	R/L	Direction Control for Data Transmition
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy
	R-B	R Bias
	RCB	R Carrier Balance
	RE	Read Enable
	RE (F) , (S)	Rotary Erase Head Transformer
	REB	R Bias
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RGBIV1-2	1V Inverted Signal 1-2
	RGO R/G OFF	Offset Voltage For AWT R
	RSF	Capstan Direction (Reverse/Stop/Forward)
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RT	Saw Tooth Terminal

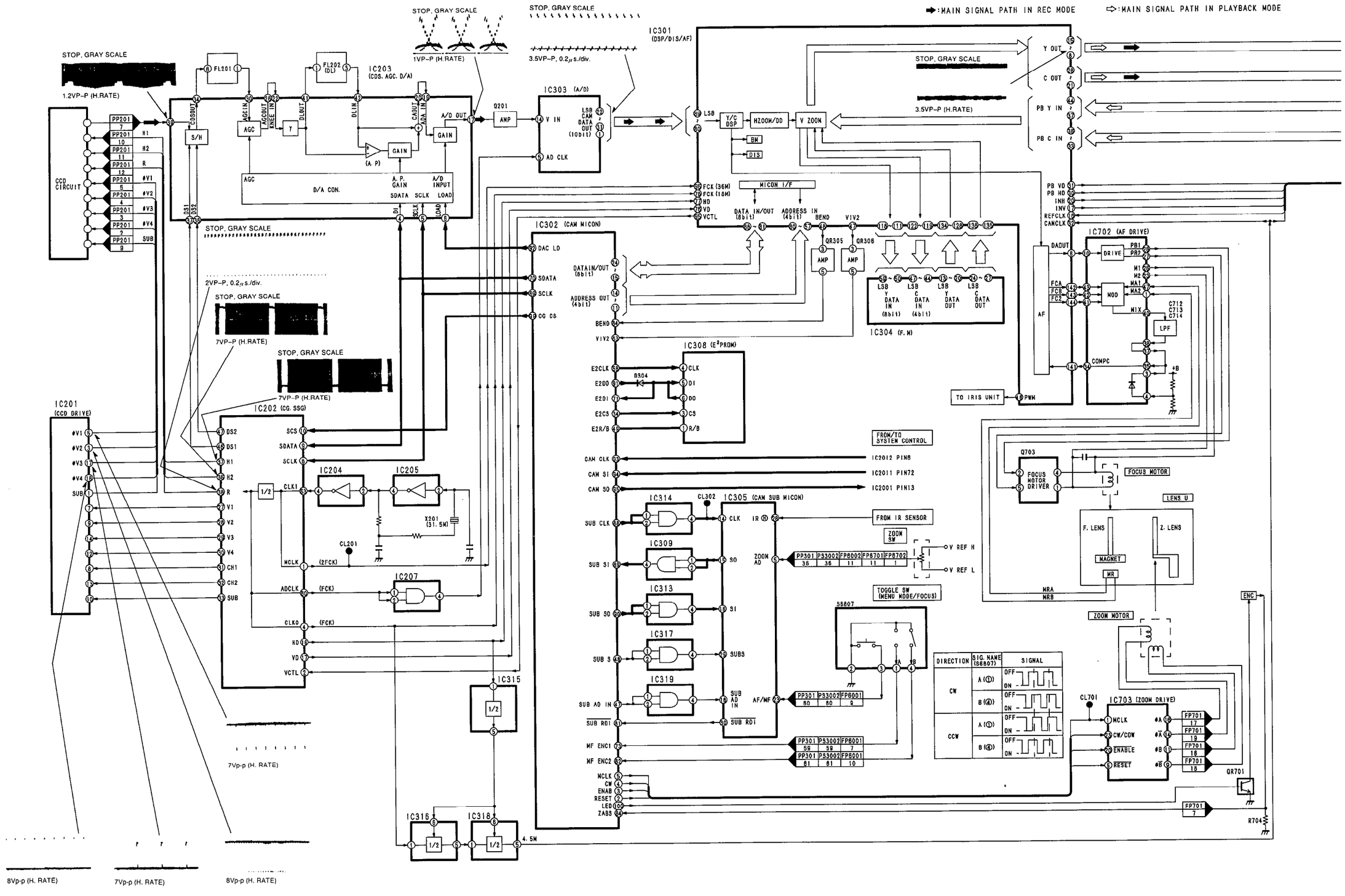
INITIAL/LOGO		ABBREVIATIONS
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
	R-YKB	R-Y Carrier Balance
S	S PHOT	Supply Photo Transistor
	S/H	Sampling Hold
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SBT	Serial Clock
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCR	Search
	SCR, S.C.R	Still Cue Review
	SEG.	Segment
	SET	White Balance Set
	SH/IRIS	Shutter/Iris Control
	SHIFT	Capasitor for Phase Shift
	SI	Serial Data Input
	SIOC	Serial In/Out Control
	SNAP	Snap Shot
	SNS LED	Sensor LED
	SO	Serial Data Output
	SPA	ATF Sampling Pulse
	SPEN	8 Bit Shift Register Enable
	SPK	Speaker
	SPO	Reset for Switching Power
	SPST	8 Bit Shift Register Strobe
	SREELP	Supply Reel Pulse
	SRT	Start
	SSA	Start Sync block Area
	SSW	Select Signal for Low Pass Filter
	ST5V	Safety Tab 5V
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe
	SWB	Switching Pre-Drive Pulse
	SYL EC	Cylinder Torque Control
	SYL FG	Cylinder FG
T	T	Tele (Zoom)
	T PHOT	Take-up Photo Transistor
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL (P)	Take-up Reel (Pulse)
	TRFIX	Tracking Fix

INITIAL/LOGO		ABBREVIATIONS
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V1-V4	V.CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCNTL	Video Control
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTLD	Video Control
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VITERBI	One of Signal Detection Method
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode
	VMODE	NTSC/PAL Select Switch
	VMVH	VH Filter Switching
	VORP	Video Overlap
	VRB	Voltage Refference Bottom
	VRBS	Voltage Refference Bottom Output
	VREF1R3V	Refference Voltage 1.3V
	VREF3R3V	Refference Voltage 3.3V
	VREFH	Refference Voltage High Side
	VREFL	Refference Voltage Low Side
	VRI	Refference Voltage Input
	VRO	Refference Voltage Output
	VRT	Voltage Refference Top
	VRTS	Voltage Refference Top Output
	VS	Switching Comparator
	VSS	Vertical Sync Signal
	VSSX	X Driver Power for Colour LCD
	VSSXY	X-Y Driver Power for Colour LCD
W	W	Wide (Zoom)
	W/N	Mode Select for Window Mode
	W/N	Wide/Normal
	WAD	Write Address Enable
	WAE	Write Address Enable
	WAERAE	Write Address Enable
	WARI	Interrupt
	WB	White Balance
	WE	Write Enable
	WEM	Memory Write Enable
	WHD	Wide Horizontal Drive Pulse
	WIDE A	Wide Zoom
	WSB	B AGC Control
	WSR	R AGC Control
	WTV	Wide TV
X	XP	FG Logic Reset
Y	Y FM0-7	Y Field Memory 0-7
	YCE	Cylinder Error Code
	YGC	Y Gain Control
	YMO 0-7	Y Field Memory 0-7
	YNCST	Noize Canceller
	YNR	Luminance Noise Reduction
	YSDP 0-7	Digital Y Out 0-7
Z	Z.ENC	Zoom Encoder
	Z.MIC	Zoom Mic
	ZENC	Zoom Encoder Output
	ZMDIR	Zoom Drive
	ZMEN	Zoom Enable
	ZMT	Zoom Motor Tele Side
	ZMT (+)/(−)	Zoom Motor (+)/(−)
	ZMTER	Zoom Motor Tele Side
	ZMW	Zoom Motor Wide Side
	ZSW	Zoom Switch

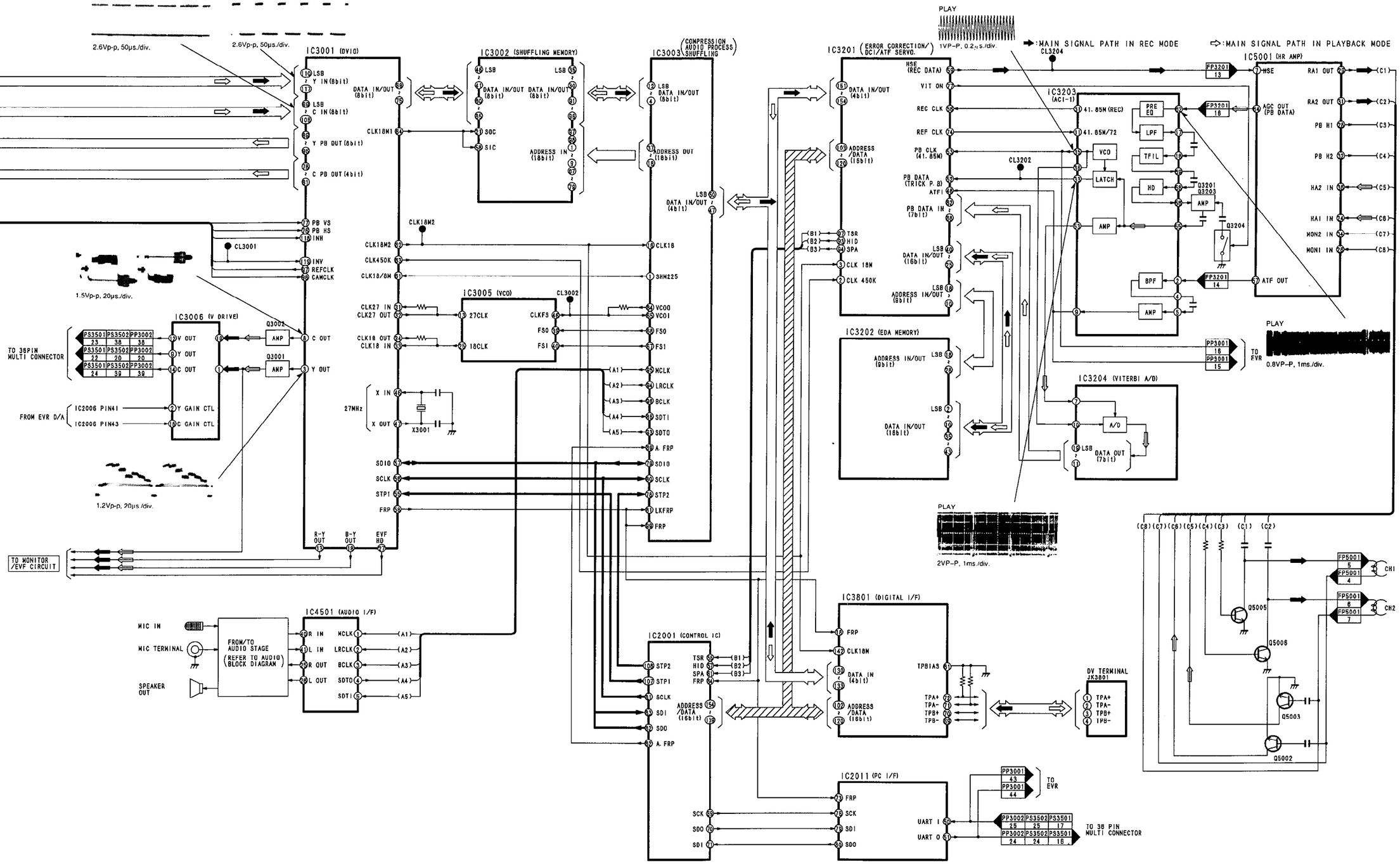
3-2. OVERALL BLOCK DIAGRAM



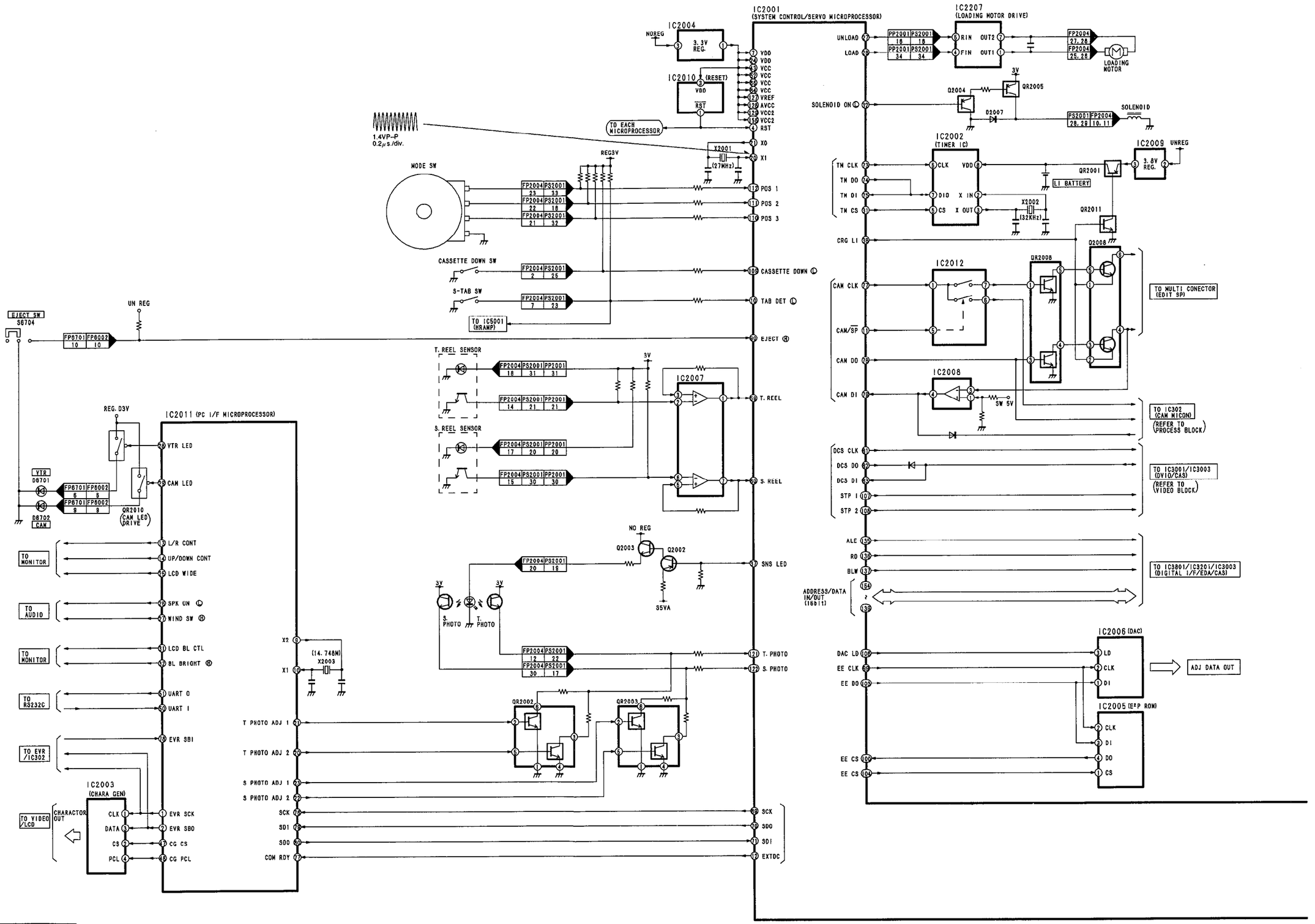
3-3. CAMERA & VIDEO BLOCK DIAGRAM



Back Page:
OVERALL Section

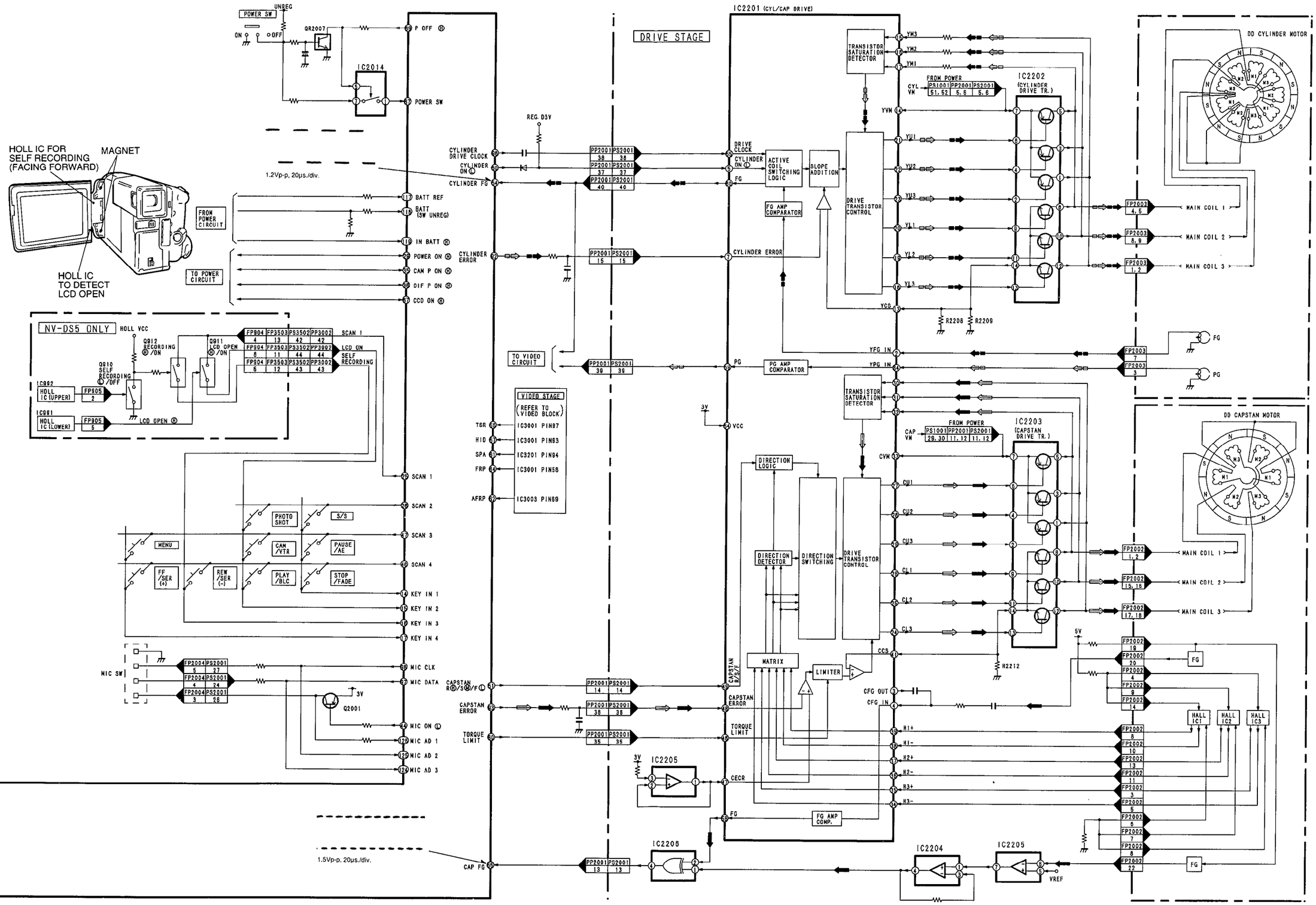

2.6Vp-p, 50μs./div.
2.6Vp-p, 50μs./div.
IC3001 (DV10)
IC3002 (SHUFFLING MEMORY)
IC3003 (COMPRESSION AUDIO PROCESS SHUFFLING)
LSB Y IN (8bit)
LSB C IN (8bit)
Y PB OUT (8bit)
C PB OUT (4bit)
DATA IN/OUT (8bit)
CLK18M1
SOC
SIC
ADDRESS IN (18bit)
ADDRESS OUT (18bit)
LSB DATA IN/OUT (4bit)
PB VS
PB HS
INH
INV
REFCLK
CAMCLK
CL3001
CLK18M2
CLK450K
CLK18/6M
SHM225
1.5Vp-p, 20μs./div.
IC3006 (V DRIVE)
IC3005 (VCO)
CL3002
CLK27 IN
CLK27 OUT
27CLK
CLKFS
FSO
FS1
CLK18 OUT
CLK18 IN
18CLK
VCO0
VCO1
Q3001
AMP
V OUT
Y OUT
C OUT
TO 36PIN MULTI CONNECTOR
FROM EVR D/A
IC2006 PIN41
IC2006 PIN43
Y GAIN CTL
C GAIN CTL
X IN
X OUT
27MHz
X3001
MCLK
LRCLK
BCLK
SDTI
SDTO
A. FRP
SDIO
SCLK
STP1
FRP
STP2
LKFRP
1.2Vp-p, 20μs./div.
R-Y OUT
B-Y OUT
EVF HD
TO MONITOR /EVF CIRCUIT
IC4501 (AUDIO I/F)
MIC IN
MIC TERMINAL
SPEAKER OUT
FROM/TO AUDIO STAGE
(REFER TO AUDIO BLOCK DIAGRAM)
R IN
L IN
R OUT
L OUT
IC2001 (CONTROL IC)
TSR
HID
SPA
SDI
SDO
ADDRESS /DATA (16bit)
IC3201 (ERROR CORRECTION/ DCT/ATF SERVO.)
DATA IN/OUT (4bit)
ADDRESS /DATA (16bit)
HSE (REC DATA)
VIT ON
REC CLK
REF CLK
PB CLK (41.85M)
PB DATA (TRICK P. B)
ATFI
PB DATA IN (7bit)
LSB DATA IN/OUT (16bit)
ADDRESS IN/OUT (8bit)
CLK 18M
CLK 450K
IC3202 (EDA MEMORY)
ADDRESS IN/OUT (9bit)
DATA IN/OUT (16bit)
IC3203 (ACI-1)
41.85M (REC)
41.85M/72
VCO
LATCH
AMP
PRE EQ
LPF
TFIL
HD
BPF
Q3201
Q3203
Q3204
IC3204 (VITERBI A/D)
A/D
LSB DATA OUT (7bit)
IC5001 (HR AMP)
HSE
AGC OUT (PB DATA)
ATF OUT
RA1 OUT
RA2 OUT
PB H1
PB H2
HA2 IN
HA1 IN
MON2 IN
MON1 IN
FP3201
PP3001
TO EVR
PLAY
1VP-P, 0.2μs./div.
0.8VP-P, 1ms./div.
2VP-P, 1ms./div.
:MAIN SIGNAL PATH IN REC MODE
:MAIN SIGNAL PATH IN PLAYBACK MODE
IC3801 (DIGITAL I/F)
FRP
CLK18M
DATA IN (4bit)
ADDRESS /DATA (16bit)
TPBIAS
TPA+
TPA-
TPB+
TPB-
DV TERMINAL JK3801
IC2011 (PC I/F)
SCK
SDO
SDI
UART I
UART O
TO EVR
TO 36 PIN MULTI CONNECTOR
(C8)(C7)(C6)(C5)(C4)(C3) (C1) (C2)
CH1
CH2
Q5005
Q5006
Q5003
Q5002

3-4. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

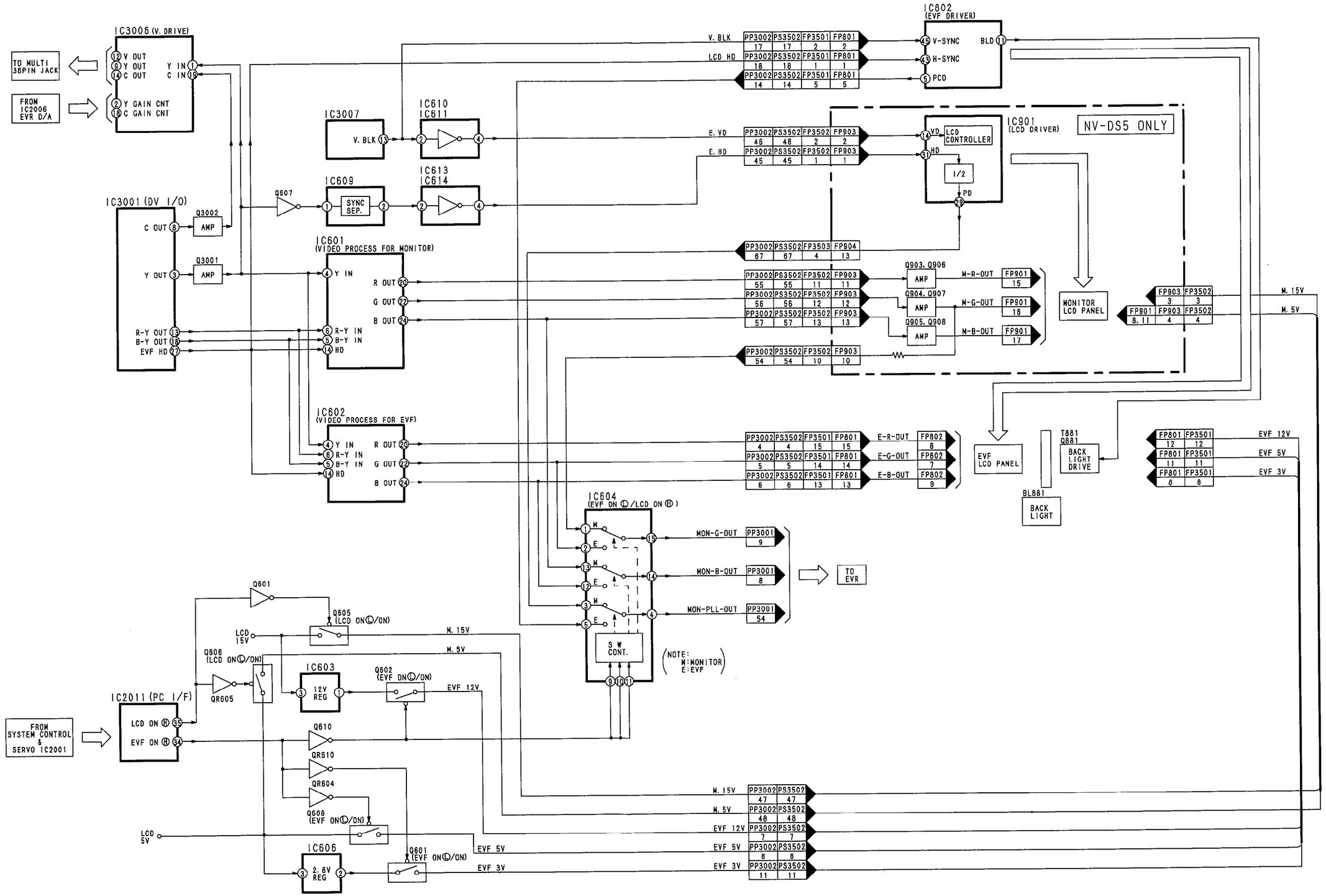


Back Page:
CAMERA & VIDEO Section

➡:CAPSTAN SERVO SPEED LOOP ⇨:CAPSTAN SERVO PHASE LOOP ➡:CYLINDER SERVO SPEED LOOP ⇨:CYLINDER SERVO PHASE LOOP

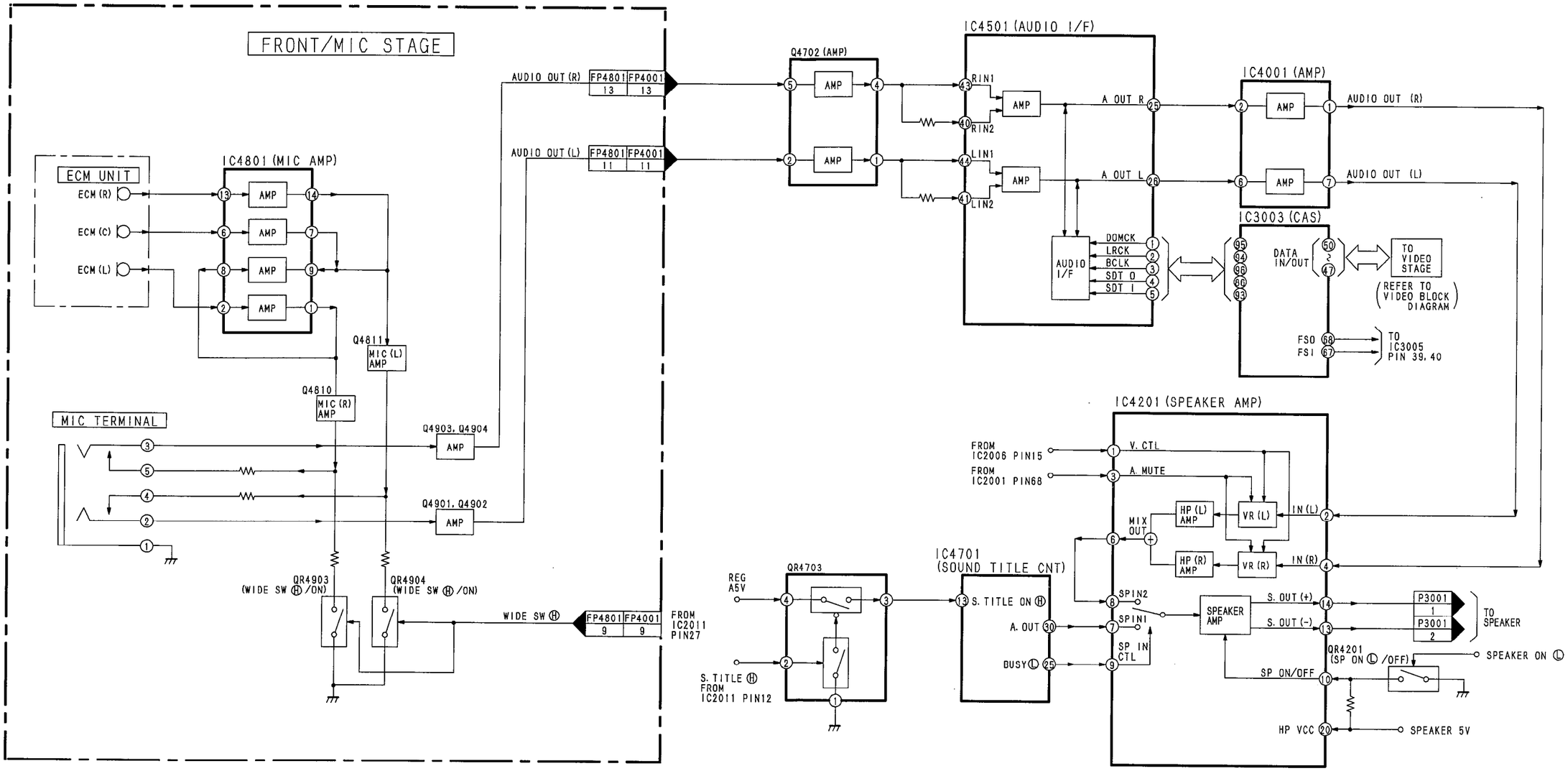


3-5. EVF & LCD MONITOR BLOCK DIAGRAM

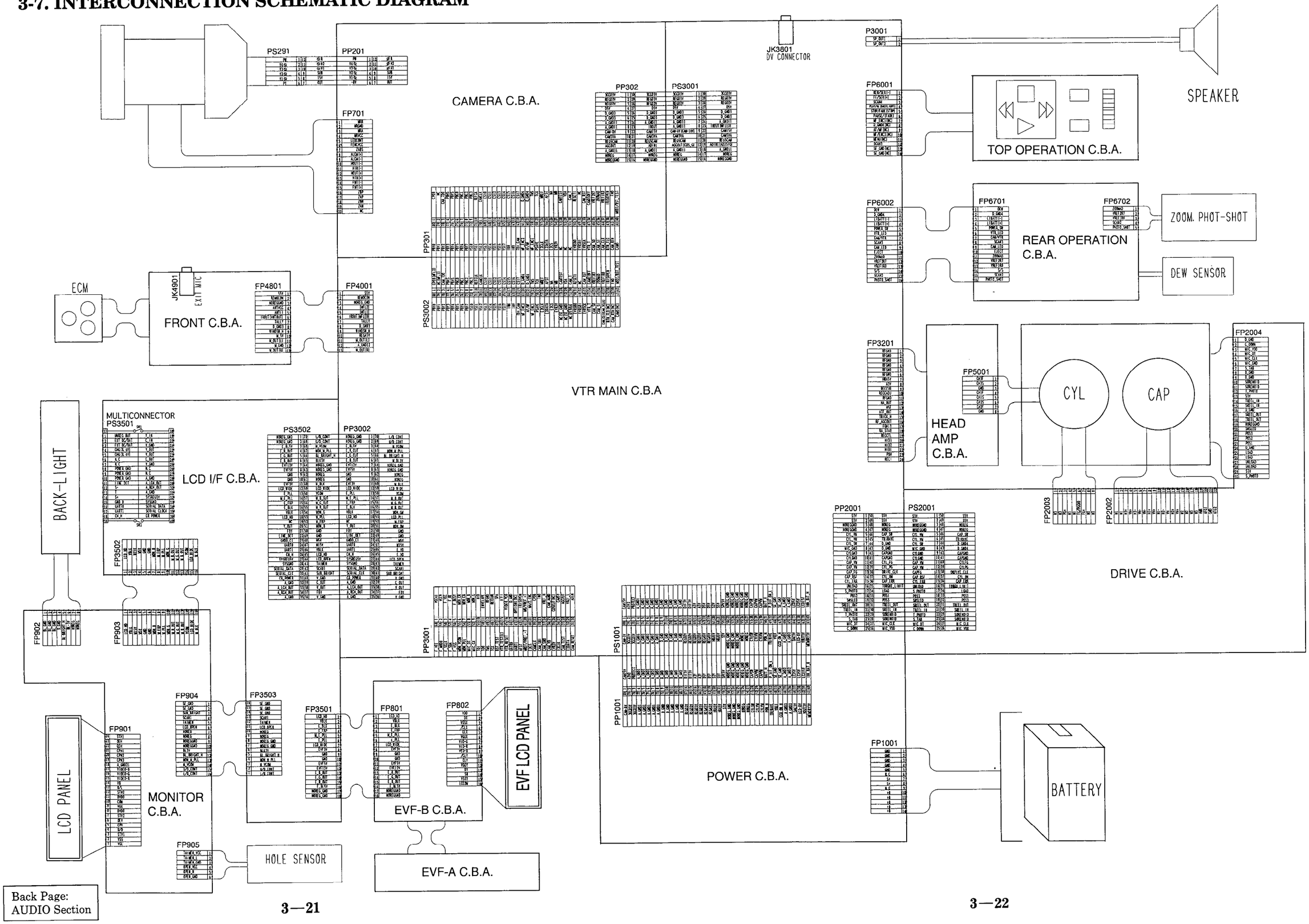


Back Page:
SYSTEM CONTROL & SERVO Section

3-6. AUDIO BLOCK DIAGRAM

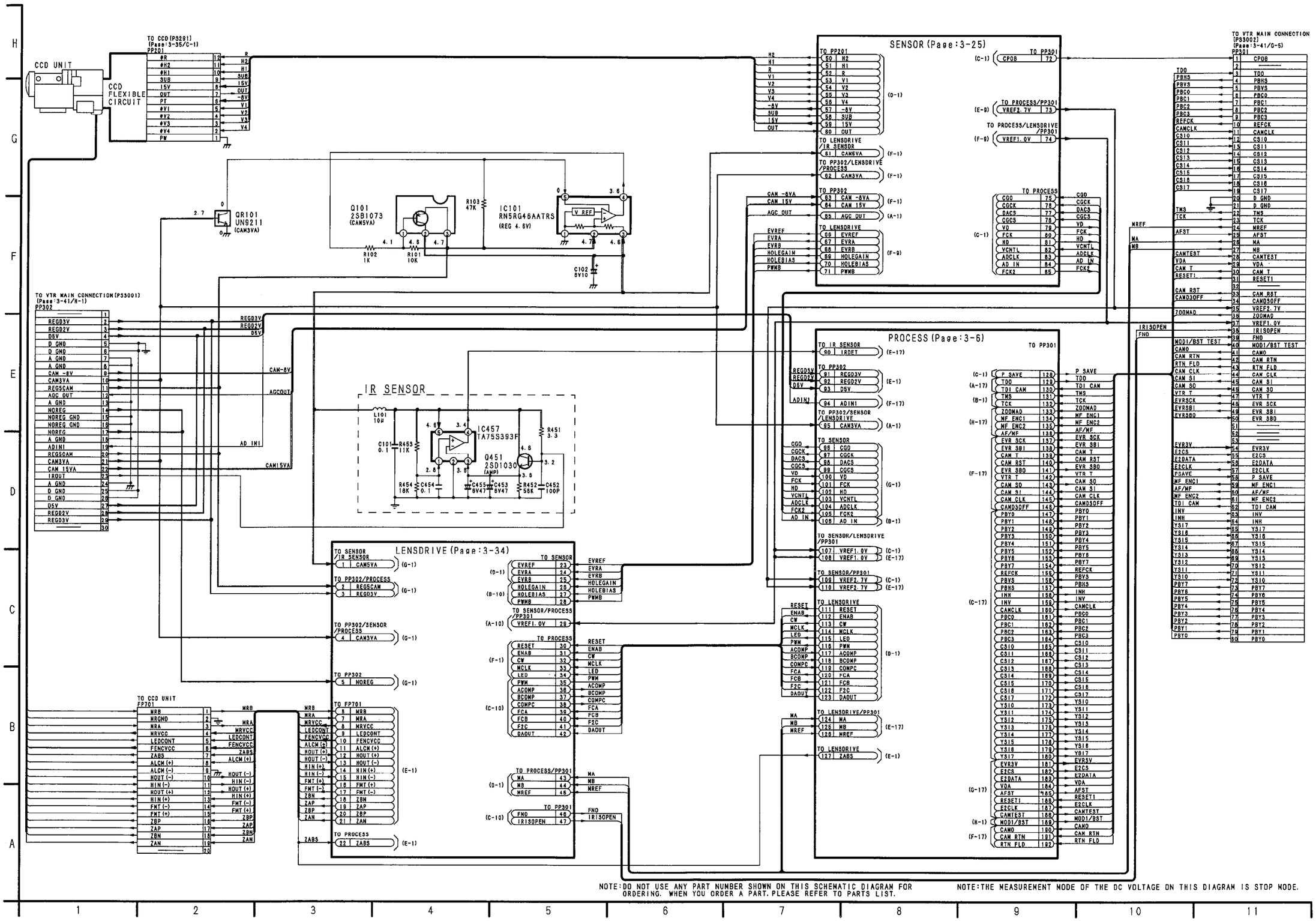


3-7. INTERCONNECTION SCHEMATIC DIAGRAM



Back Page:
AUDIO Section

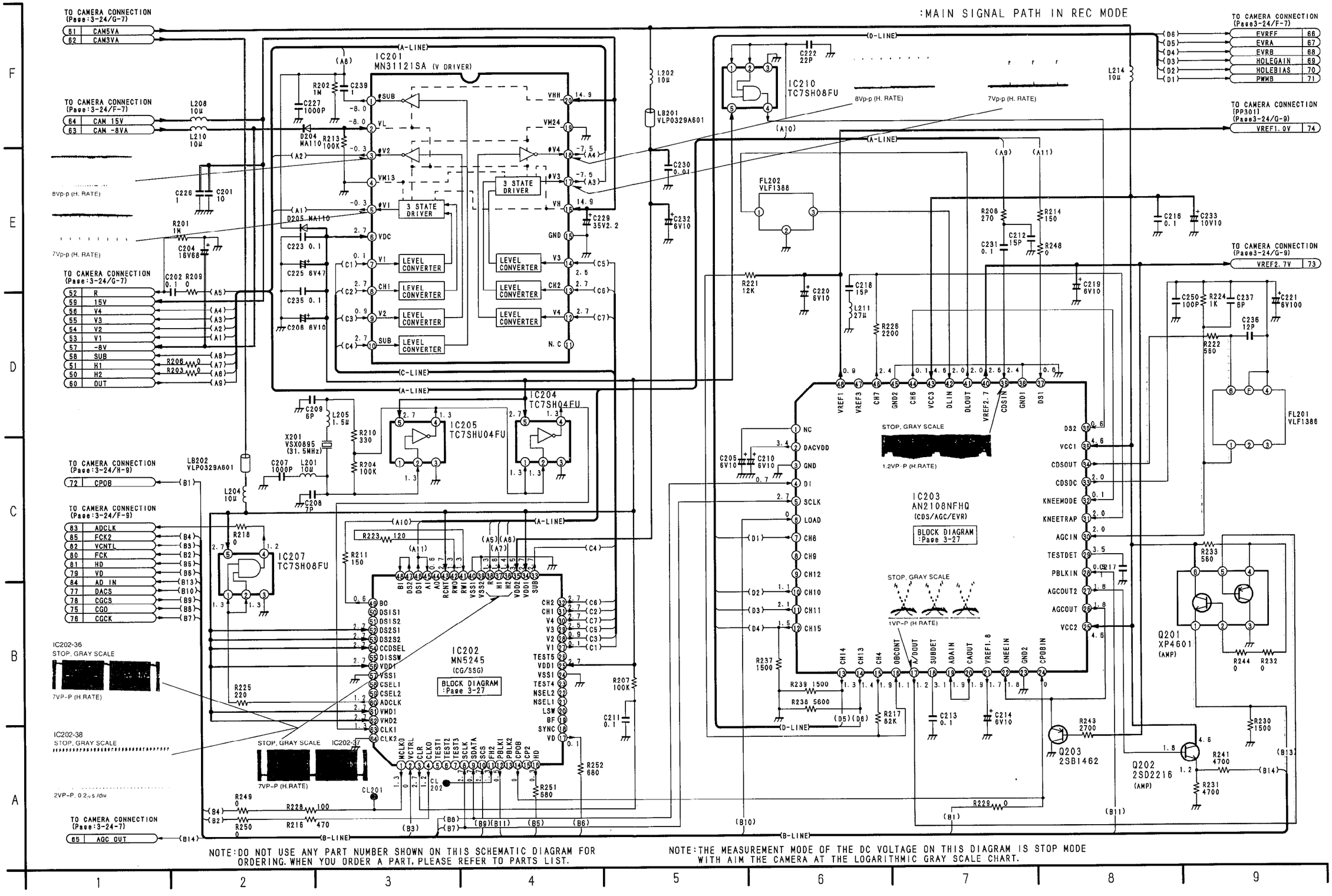
3-8. CAMERA CONNECTION SCHEMATIC DIAGRAM



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

3-9. SENSOR SCHEMATIC DIAGRAM



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

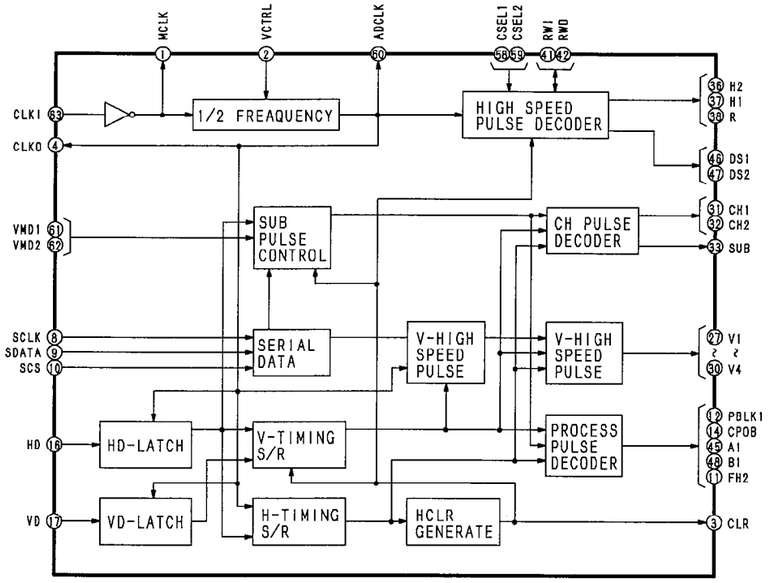
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

Back Page:
CAMERA CONNECTION Section

SENSOR IC BLOCK

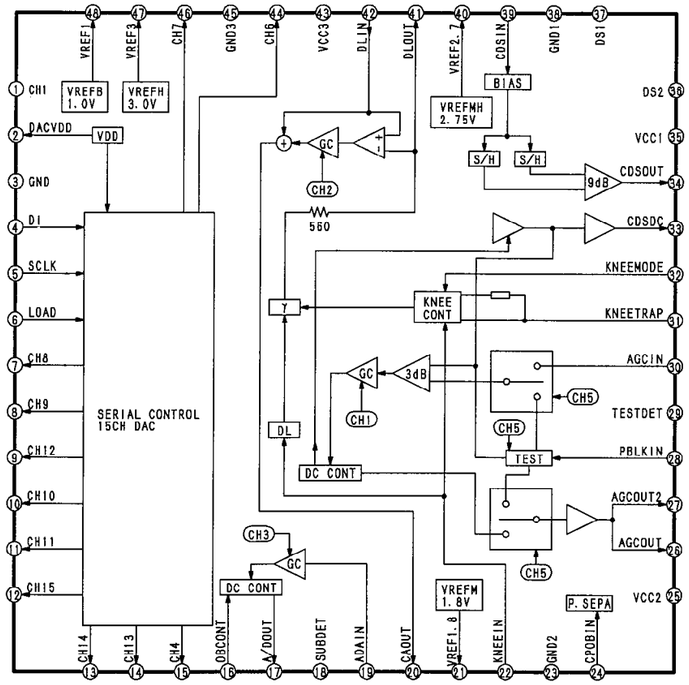
IC202: MN5245

(SCHEMATIC DIAGRAM:Page 3-25/B-4)



IC203: AN2108NFHQ

(SCHEMATIC DIAGRAM:Page 3-26/C-7)



PROCSS I/O TABLE

IC301: DSP

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	POR	I	Reset: Power On (L: Reset, H: Normal/TRST)	56	ADRR4	I	Micom Address Signal
				57	ADDR3	I	Micom Address Signal
2	PDOWN	I	Camera Signal Process Halt Signal: Playback Mode (L: Halt)	58	ADDR2		
				59	ADDR1		
				60	ADDR0		
3	AVDD	—	Linear AF, Analogue Voltage	61	DB7	I/O	Micom Address Signal
4	VRT	—	Linear AF, Reference Top Voltage	62	DB6		
5	VRB	—	Linear AF, Reference Bottom Voltage	63	DB5		
6	DAOUT	O	Linear AF, DA Output	64	DB4		
7	AVSS	—	Linear AF, Analogue GND	65	DB3		
8	VZYOUT7	I	Digital Y Signal (MSB)	66	DB2		
9	VZYOUT6			67	DB1		
10	VZYOUT5			68	DB0		
11	VZYOUT4			69	ASTB	I	Micom Address Strove Signal
12	VZYOUT3			70	DSTB	I	Micom Data Strove Signal
13	VZYOUT2			71	RW	I	Micom Read/Write Signal
14	VZYOUT1			72	VDDH	—	INTERFACE Voltage Input (3.6V)
15	VZYOUT0		Digital Y Signal (LSB)	73	TST3	I	Test Select Input (Noraml: L)
16	DDFCK	I	DD/Clock Input for Playback	74	TST2	I	Test Select Input (Noraml: L)
17	INV	O	INH Signal	75	TST1	I	Test Select Input (Normal: L, BSCAN: H)
18	VDD	—	Digital Voltage				
19	VSS	—	Digital GND	76	VD	I	VD Signal from SSG
20	INH	O	INH Signal	77	HD	I	HD Signal from SSG
21	VZCOUT7	O	Digital C Signal (MSB)	78	FCK	I	FCK Signal from SSG
22	VZCOUT6			79	VDDH	I	Interface Voltage (3.6V)
23	VZCOUT5			80	ADIN9	I	A/D Signal (MSB)
24	VZCOUT4			81	ADIN8		
25	VZCOUT3			82	ADIN7		
26	VZCOUT2			83	ADIN6		
27	VZCOUT1			84	ADIN5		
28	VZCOUT0		Digital C Signal (LSB)	85	ADIN4		
29	UVSELOUT	O	(N.C.)	86	ADIN3		
30	PBHD	I	Playback HS	87	ADIN2		
31	PBVD	I	Playback VS	88	ADIN1		
32	VRT45M	O	SYNC (4.5MHz) to VTR	89	ADIN0		A/D Signal (LSB)
33	PBCIN3	I	Playback C Siganl (MSB)	90	VDD	—	Digital Voltage
34	PBCIN2			91	VSS	—	Digital GND
35	PBCIN1			92	TST0	I	Test Select Input (Normal: L, BSCAN: H)
36	PBCIN0		Playback C Siganl (LSB)				
37	PBYIN7	I	Playback Y Signal (MSB)	93	TST4	I	Test Select Input (Normal: L, BSCAN: H)
38	PBYIN6						
39	PBYIN5			94	DSEL	I	Delay Select (0T: L, 1T: H)
40	PBYIN4			95	VCTRLO	O	CCD V-Transfer Halt Signal (Halt: H)
41	PBYIN3						
42	PBYIN2			96	FCK2	I	Camera 2FCK Signal: from Sensor Circuit
43	PBYIN1						
44	PBYIN0		Playback Y Signal (LSB)	97	NHRST	—	(N.C.)
45	MSEL1	I	Micom Select Signal	98	TDO	O	Boundary Scan Data
46	PWM	O	PWM for ALC Control	99	TDI	I	Boundary Scan Data
47	V1V2	O	Act Detect Finish Signal to Micom	100	TMD	I	Boundary Scan Mode Select
48	BEND	O	Block Data Operation Finish Signal to Micom	101	TCK	I	Boundary Scan Clock
				102	FMPOR	O	Field Memory POR Signal to FM
49	MVD	O	VD Output for Micom	103	FMOE	O	Field Memory OE Signal to FM
50	ADRR8	I	GND	104	FMRAD	O	Field Memory RAD Signal to FM
51	ADRR7			105	FMSTR	O	Field Memory RSTR Signal to FM
52	ADRR6			106	FMRE	O	Field Memory RE Signal to FM
53	ADRR5			107	FMRWAE	O	Field Memory RAE/WAE Signal to FM
54	VDD	—	Digital Voltage	108	FMWAD	O	Field Memory WAD Signal to FM
55	VSS	—	Digital GND	109	FMRSTW	O	Field Memory RSTW Signal to FM

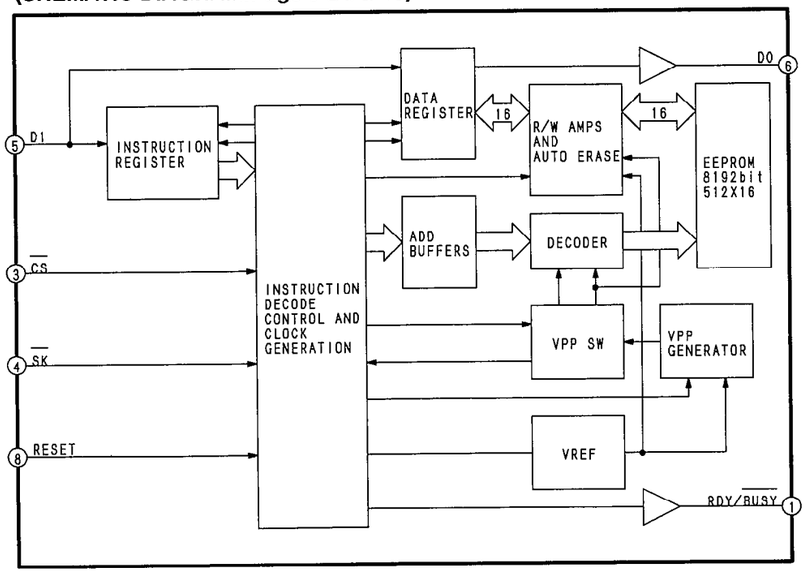
PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
110	FMWE	O	Field Memory WE Signal to FM
111	FMYOUT7	I	Field Memory Y Signal (MSB)
112	FMYOUT6		
113	FMYOUT5		
114	FMYOUT4		
115	FMYOUT3		
116	FMYOUT2		
117	FMYOUT1		
118	FMYOUT0		Field Memory Y Signal (LSB)
119	FMCOUT3	I	Field Memory C Signal (MSB)
120	FMCOUT2		
121	FMCOUT1		
122	FMCOUT0		Field Memory C Signal (LSB)
123	VZPLSTST	—	(N.C.)
124	HZPLSTST	—	(N.C.)
125	FMYIN7	O	Y Signal (MSB) to FM
126	VDD	—	Digital Voltage
127	VSS	—	Digital GND

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
128	FMYIN6	O	Y Signal (MSB 2nd) to FM
129	FMYIN5		
130	FMYIN4		
131	FMYIN3		
132	FMYIN2		
133	FMYIN1		
134	FMYIN0		Y Signal (LSB) to FM
135	FMCIN3	O	C Signal (MSB) to FM
136	FMCIN2		
137	FMCIN1		
138	FMCIN0		C Signal (LSB) to FM
139	ACOMP	I	Step-out Detect Pulse (A Phase)
140	BCOMP	I	Step-out Detect Pulse (B Phase)
141	SIG	I	Detect Pulse
142	FCA	O	LM Modulation Pulse (A Phase)
143	FCB	O	LM Modulation Pulse (B Phase)
144	F2C	O	LM Adder Pulse

PROCSS IC BLOCK

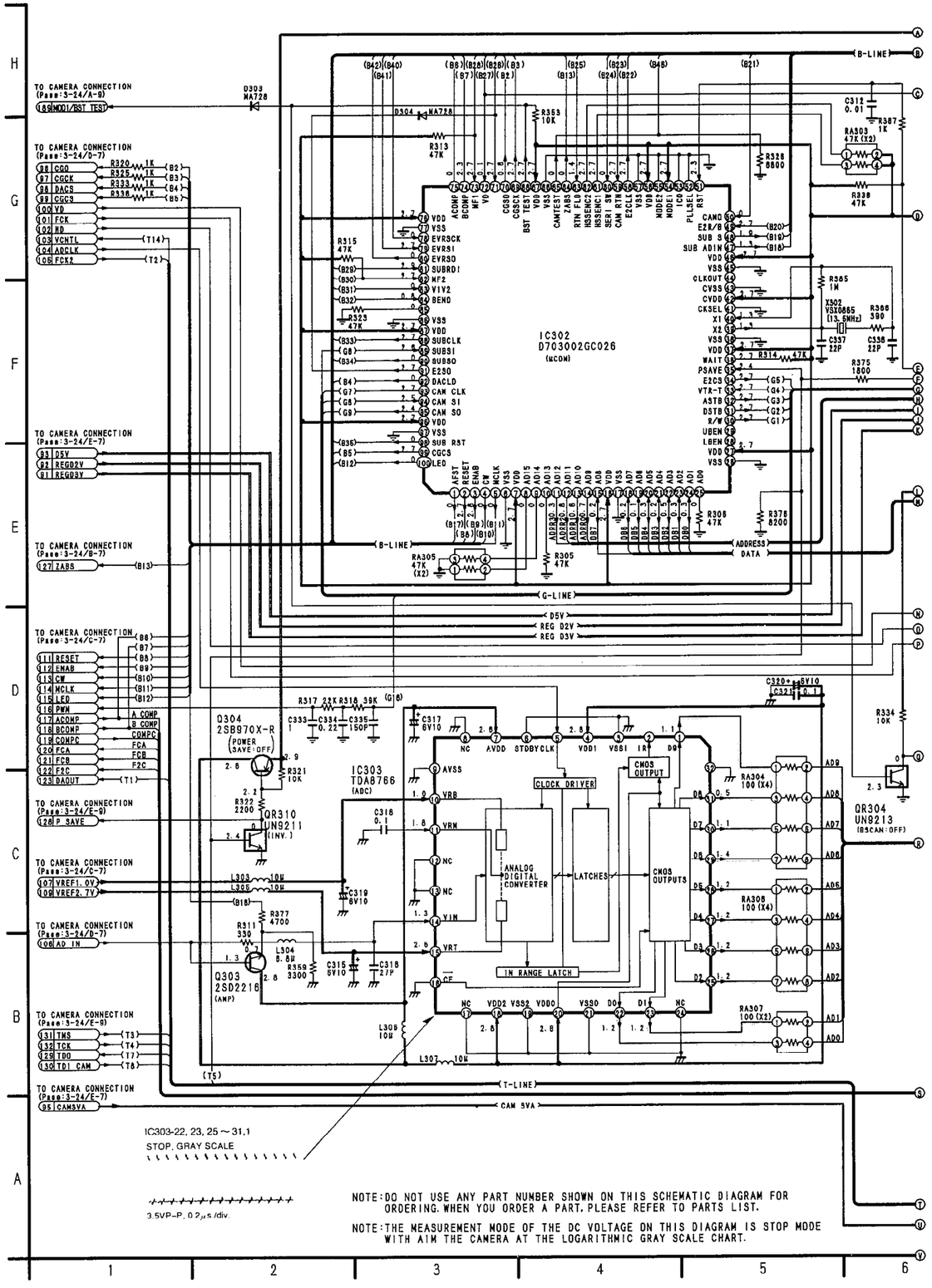
IC308: AK6480AF

(SHEMATIC DIAGRAM:Page 3-24/G-13)



Back Page:
SENSOR Section

3-10. PROCESS SCHEMATIC DIAGRAM



:MAIN SIGNAL PATH IN REC MODE
:MAIN SIGNAL PATH IN PLAYBACK MODE

IC313 TC7SH08FU
IC314 TC7SH08FU
IC317 TC7SH08FU
IC319 TC7SH08FU
IC309 TC7SH08FU
IC310 TC7SH08FU
QR303 XP1211 (AMP)
QR306 XP1211 (AMP)
QR305 XP1211 (AMP)
IC308 AK6480AF (EEPROM)
Q302 2SB970X-R (EVR3V:OFF)
QR302 UN9211 (RESET)
IC301 (DSP)
IC304 ZA4035W (FM)
IC305 MN155402M9P (CAMERA SUB MICRO PROCESSOR)
IC306 TA75W01FU

BLOCK DIAGRAM :Page 3-29

I/O TABLE: Page 3-28~29

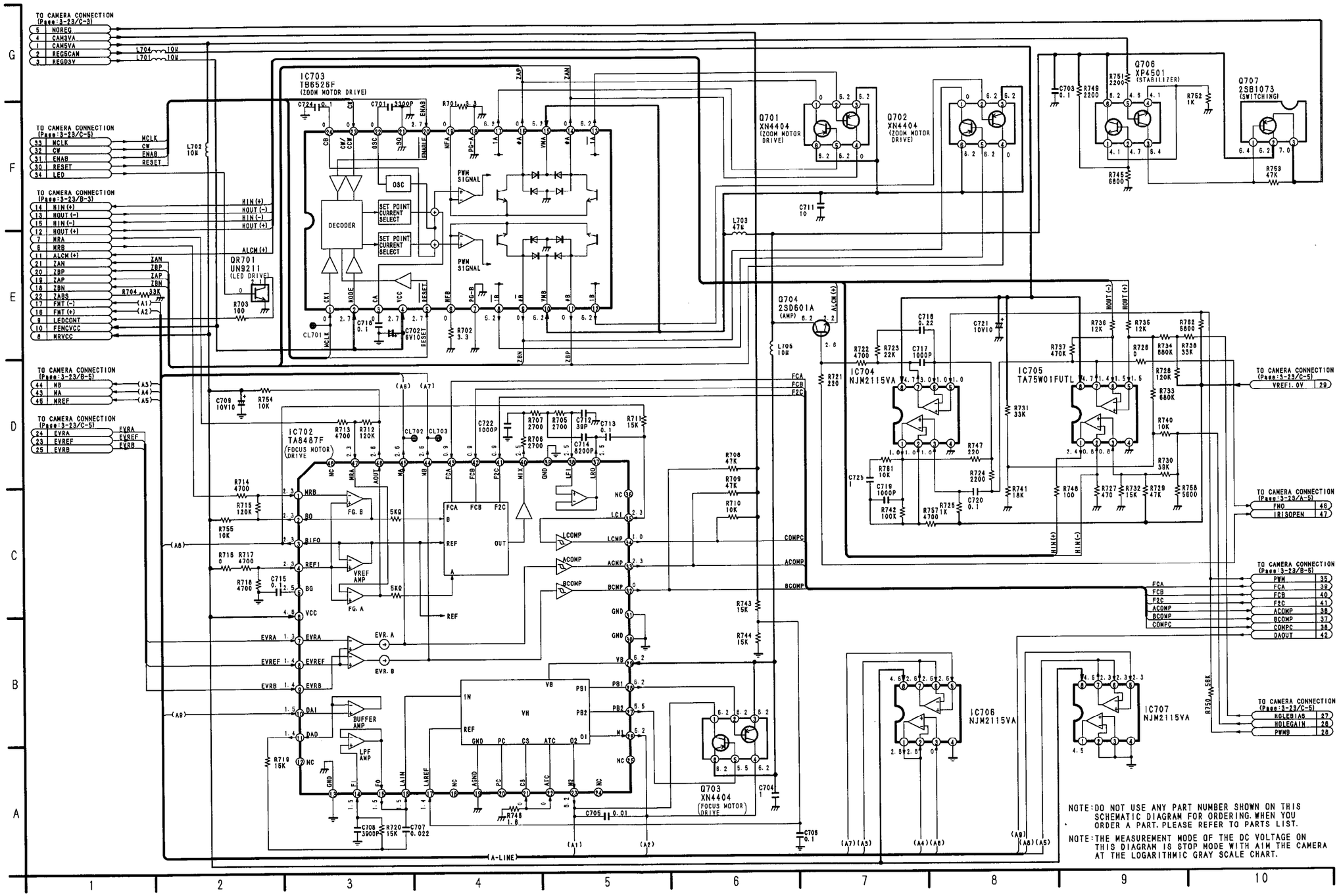
STOP GRAY SCALE

3.5VP-P (H RATE)

B-LINE
G-LINE
ADDRESS
DATA
REG D2V
REG D3V
T-LINE
CAM 3VA
Y-SIGNAL
C-SIGNAL

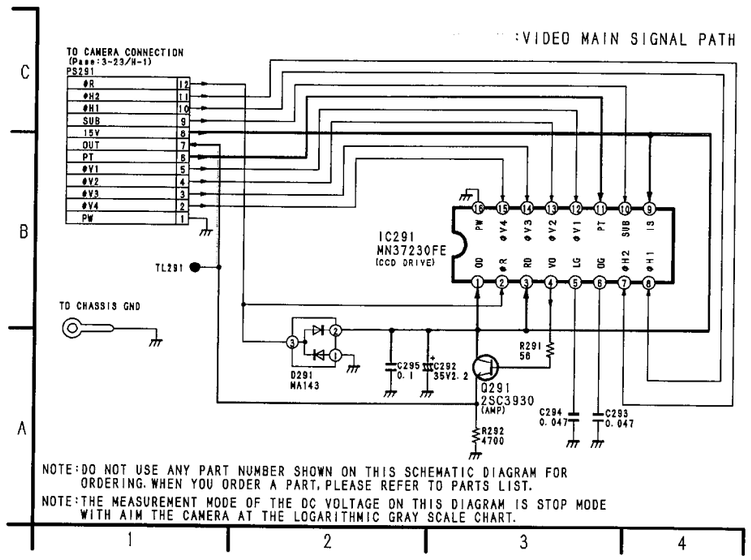
TO CAMERA CONNECTION (Page:3-24/E-9)
ZOOMAD 133
MF ENC1 134
MF ENC2 135
AF/MF 138
TO CAMERA CONNECTION (Page:3-24/A-9)
CANTEST 188
E2DATA 183
VDA 184
EVR3V 181
E2CS 182
AFST 185
E2CLK 187
RESET1 186
TO CAMERA CONNECTION (Page:3-24/E-7)
ADIN1 94
TO CAMERA CONNECTION (Page:3-24/A-9)
CAN0 190
CAM RTN 191
RTN FLD 192
TO CAMERA CONNECTION (Page:3-24/D-9)
EVR SCK 137
EVR SBI 138
CAM T 139
EVR SBO 141
CAM SO 143
CAM RST 140
CAM30FF 142
VTR T 142
CAM SI 144
CAM CLK 145
TO CAMERA CONNECTION (Page:3-24/C-7)
VREF2.7V 110
VREF1.0V 106
TO CAMERA CONNECTION (Page:3-24/B-7)
NA 124
NB 125
NREF 129
TO CAMERA CONNECTION (Page:3-24/E-7)
IRDET 50
TO CAMERA CONNECTION (Page:3-24/C-9)
PBY0 147
PBY1 148
PBY2 149
PBY3 150
PBY4 151
PBY5 152
PBY6 153
PBY7 154
CANCLK 155
PBR2 156
PBR3 157
INH 158
INV 159
REFCK 160
PBC0 161
PBC1 162
PBC2 163
PBC3 164
CS10 165
CS11 166
CS12 167
CS13 168
CS14 169
CS15 170
CS16 171
CS17 172
YS10 173
YS11 174
YS12 175
YS13 176
YS14 177
YS15 178
YS16 179
YS17 180

3-11. LENS DRIVE SCHEMATIC DIAGRAM

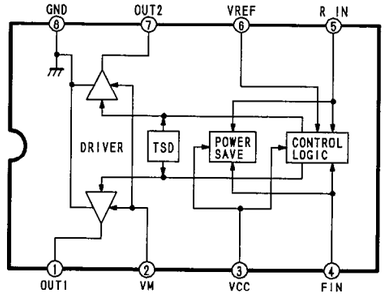


Back Page:
PROCESS Section

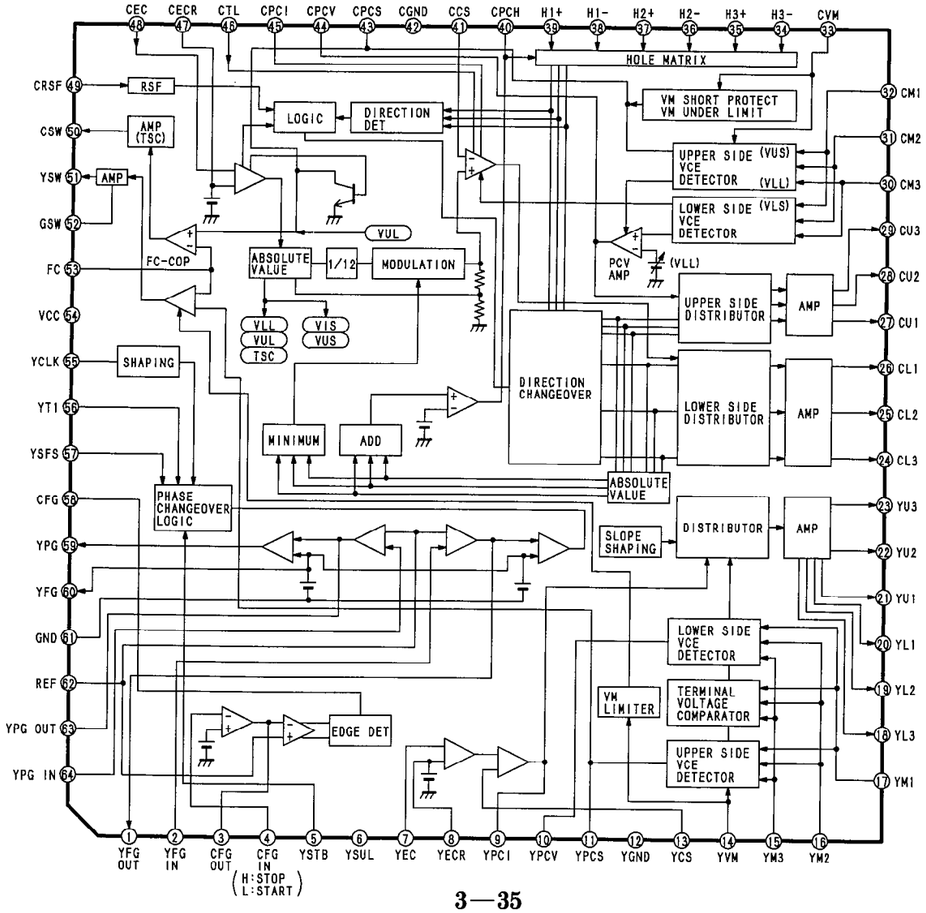
3-12. CCD FLEX. CARD SCHEMATIC DIAGRAM DRIVE IC BLOCK


:VIDEO MAIN SIGNAL PATH
TO CAMERA CONNECTION
(Page:3-23/H-1)
PS291
TL291
TO CHASSIS GND
IC291
MN37230FE
(CCD DRIVE)
D291
MA143
Q291
2SC3930
(AMP)
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

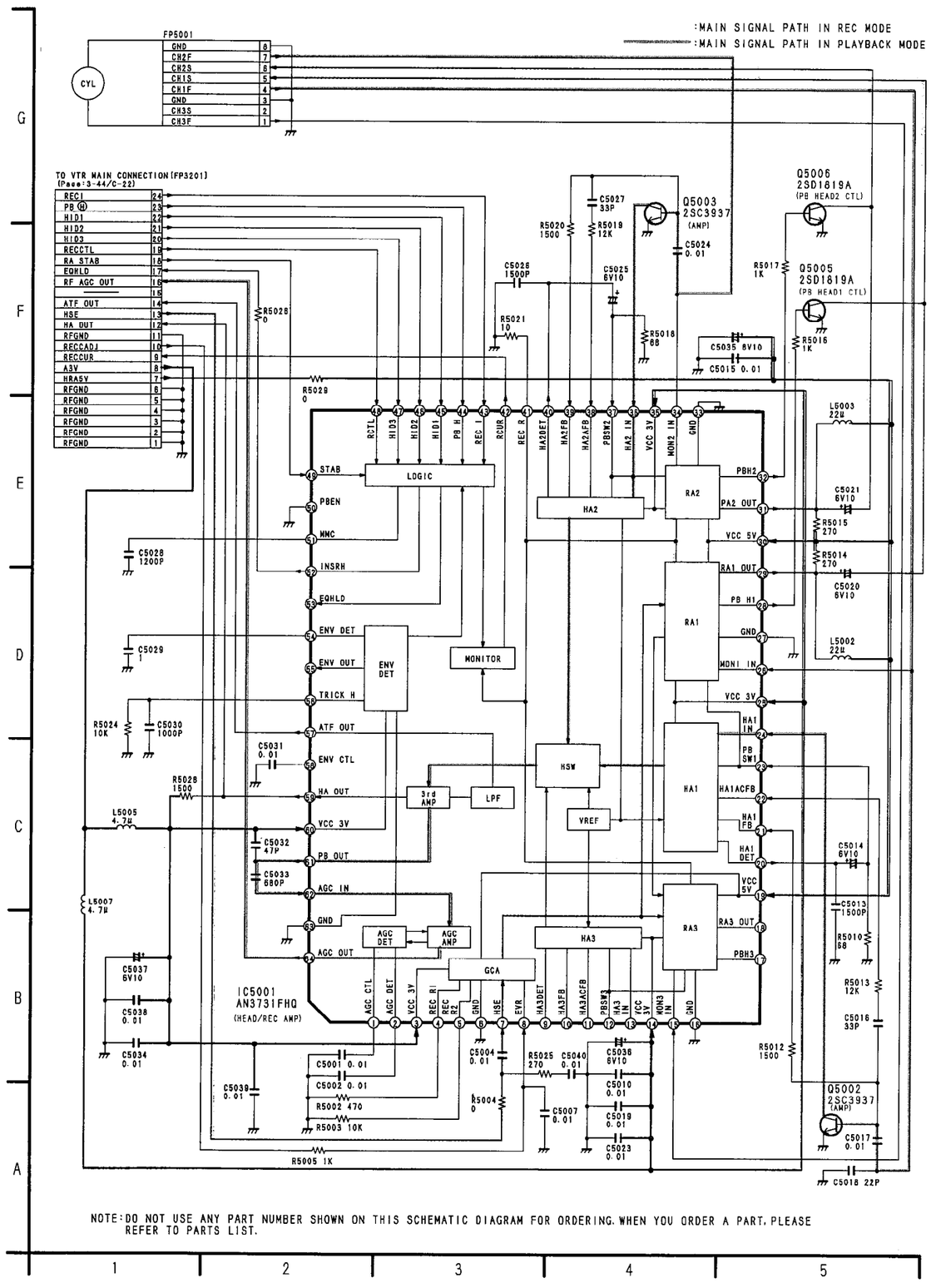
IC2207: BA6289F
(SHEMATIC DIAGRAM:Page 3-37/B-3)



IC2201: TB6519FA
(SCHEMATIC DIAGRAM:Page 3-38/E-7)

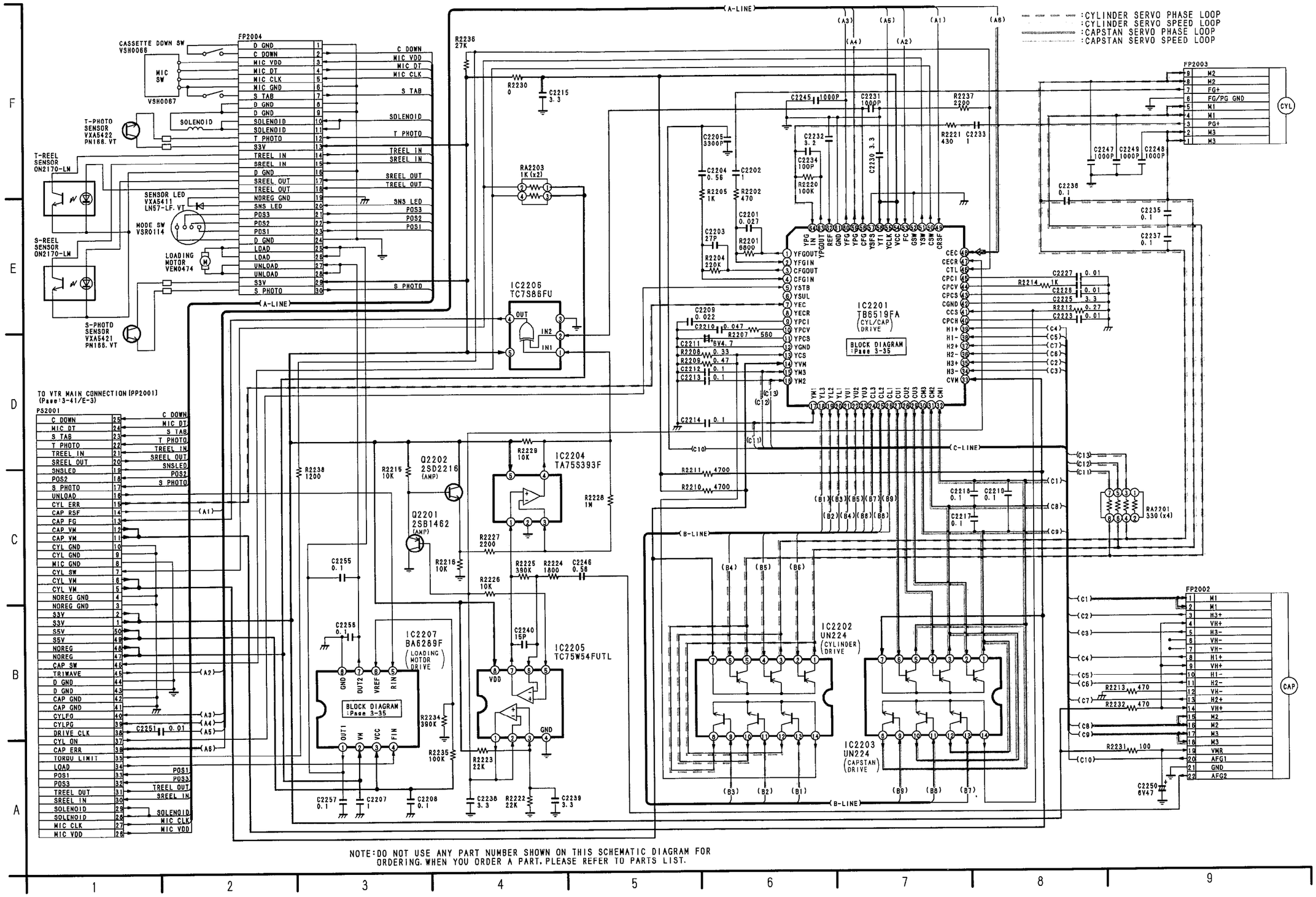


3-13. HEAD AMP SCHEMATIC DIAGRAM



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

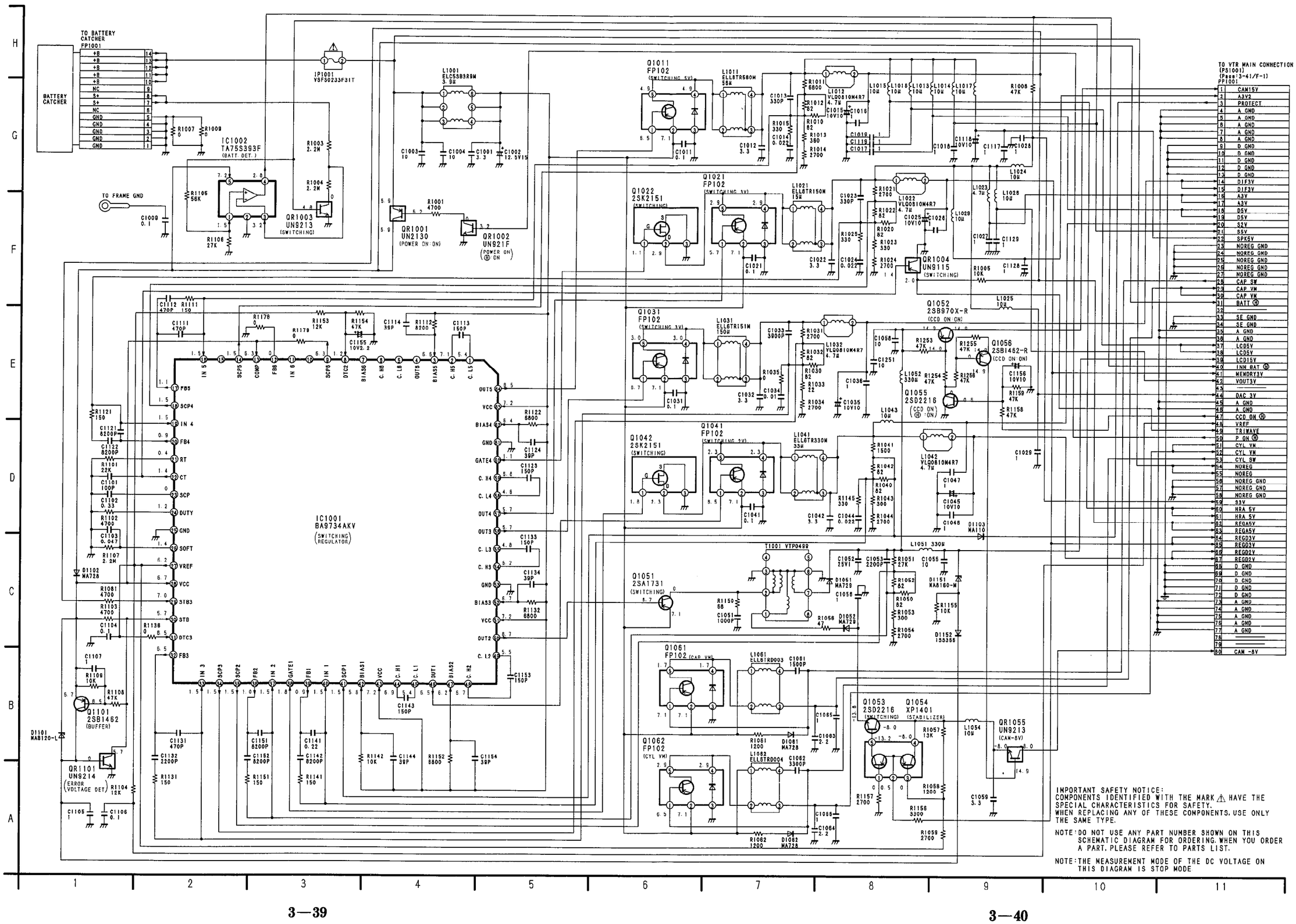
3-14. DRIVE SCHEMATIC DIAGRAM



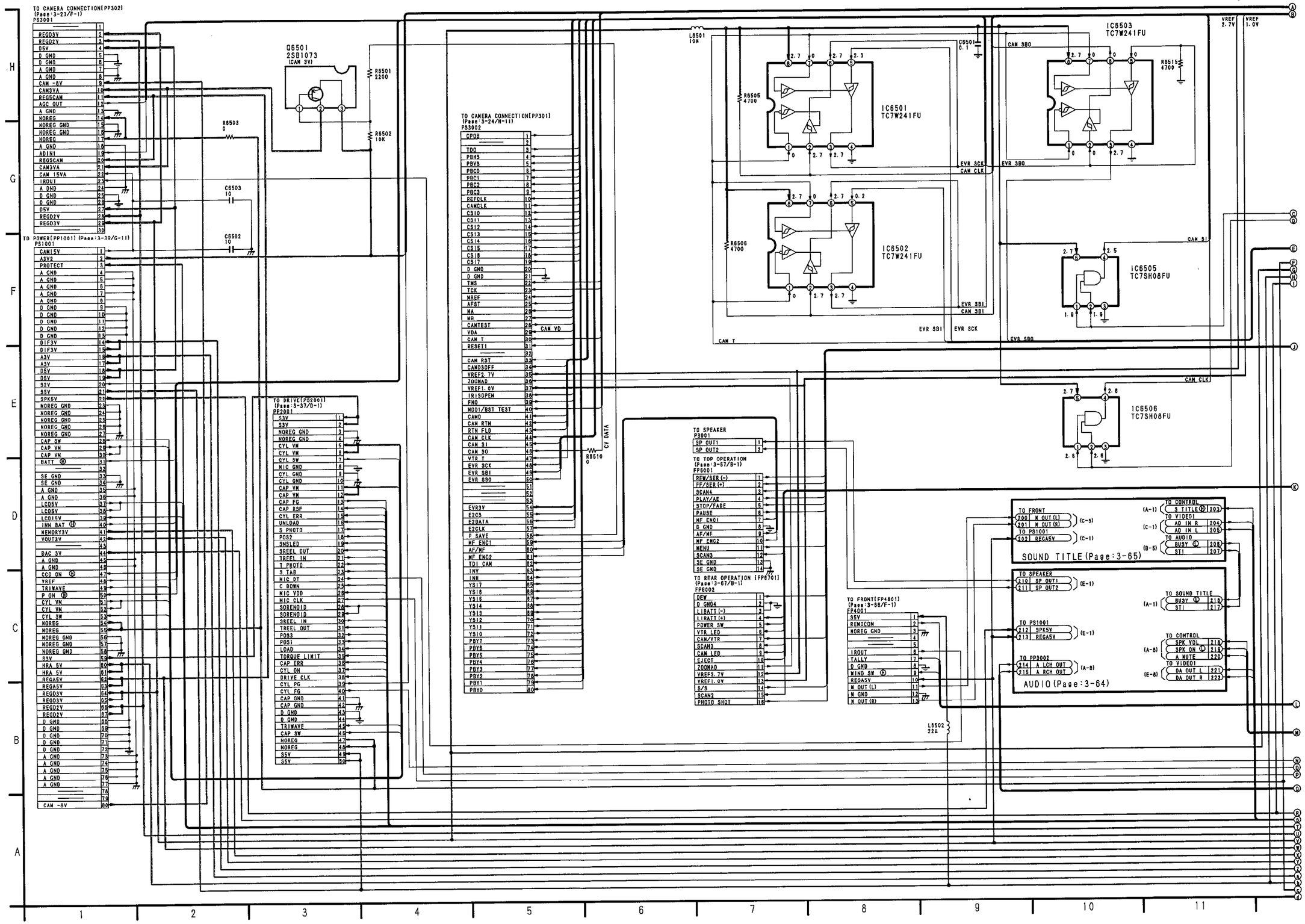
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page:
CCD FELX. CARD / HEAD AMP Section

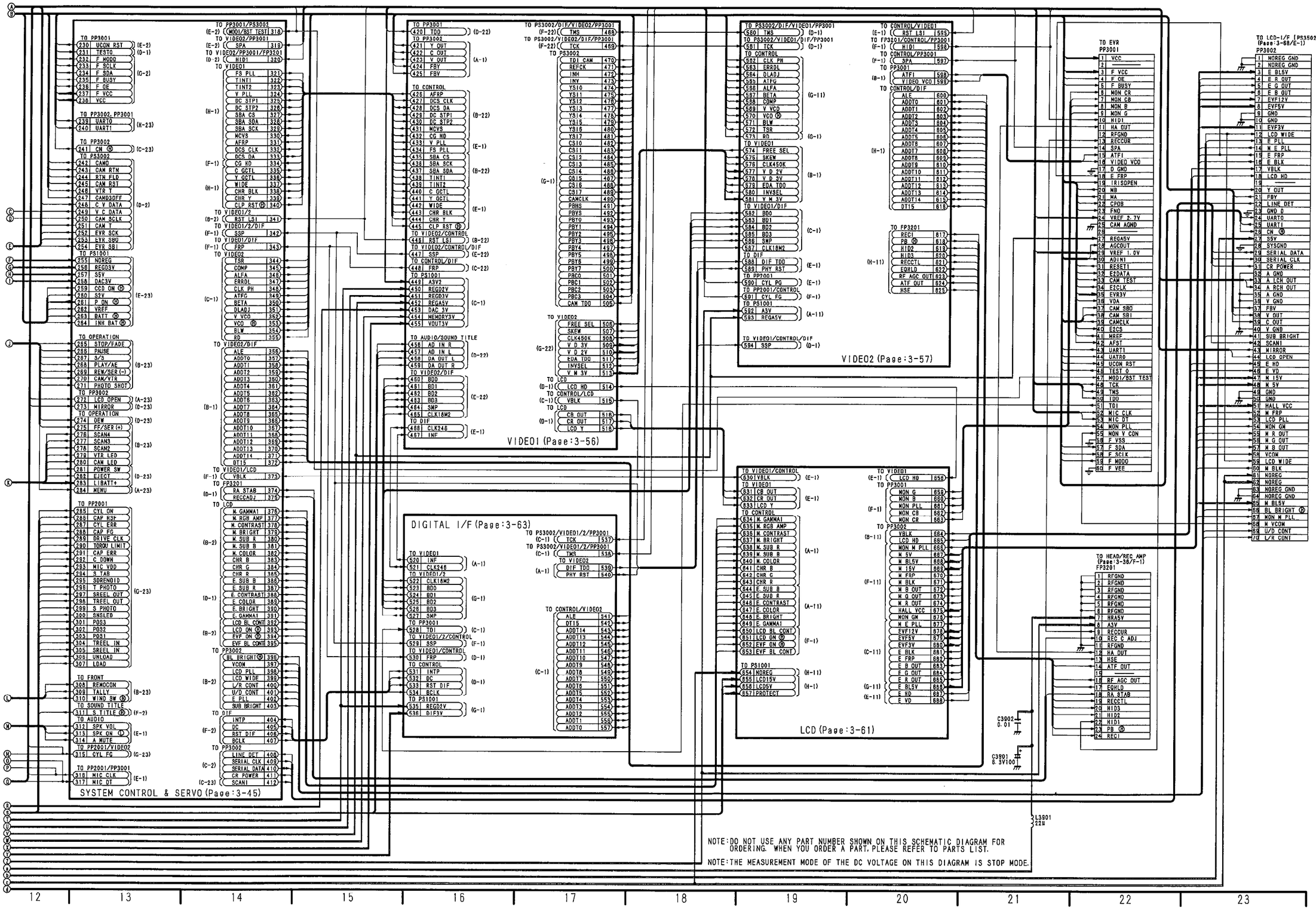
3-15. POWER SCHEMATIC DIAGRAM



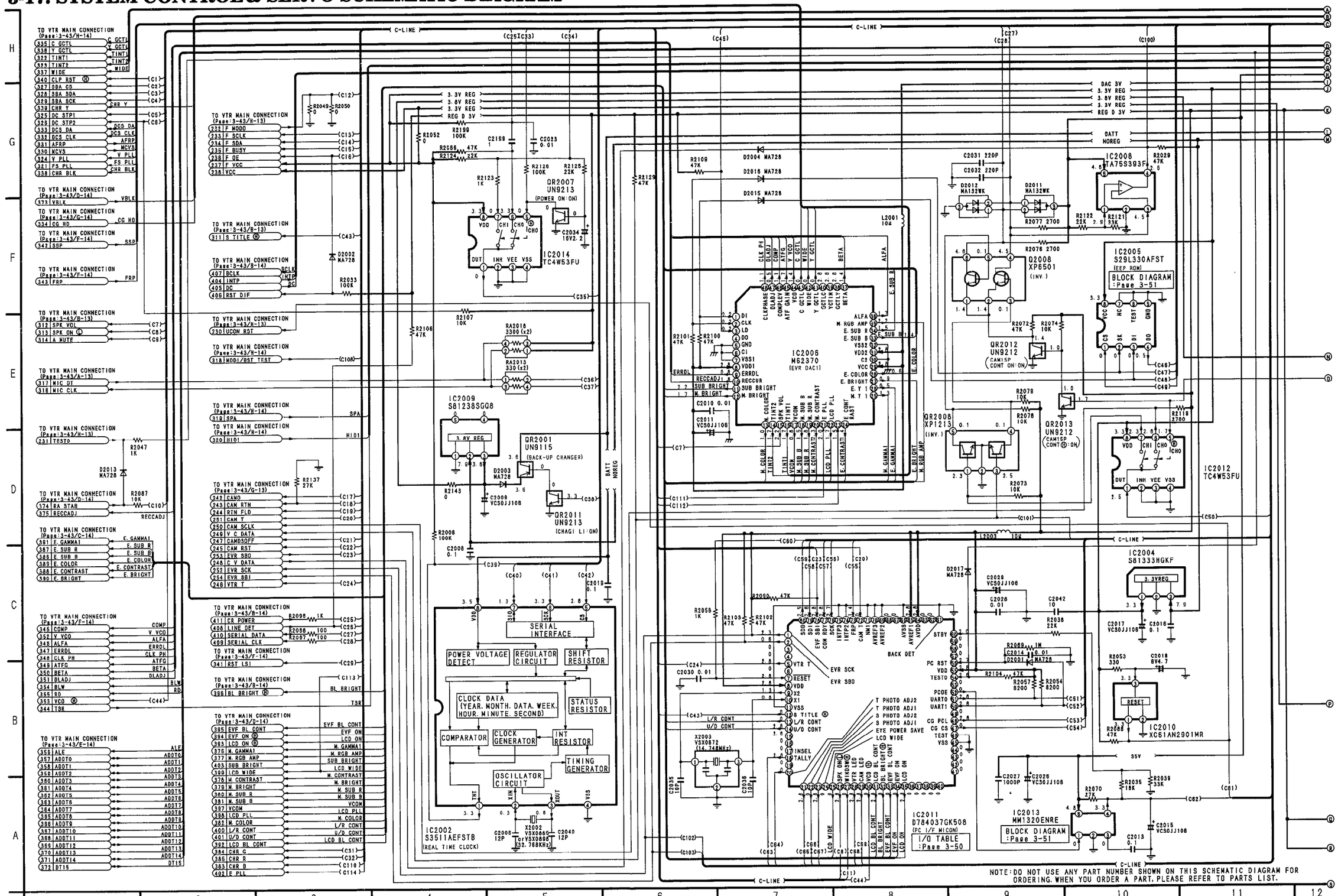
3-16. VTR MAIN CONNECTION SCHEMATIC DIAGRAM



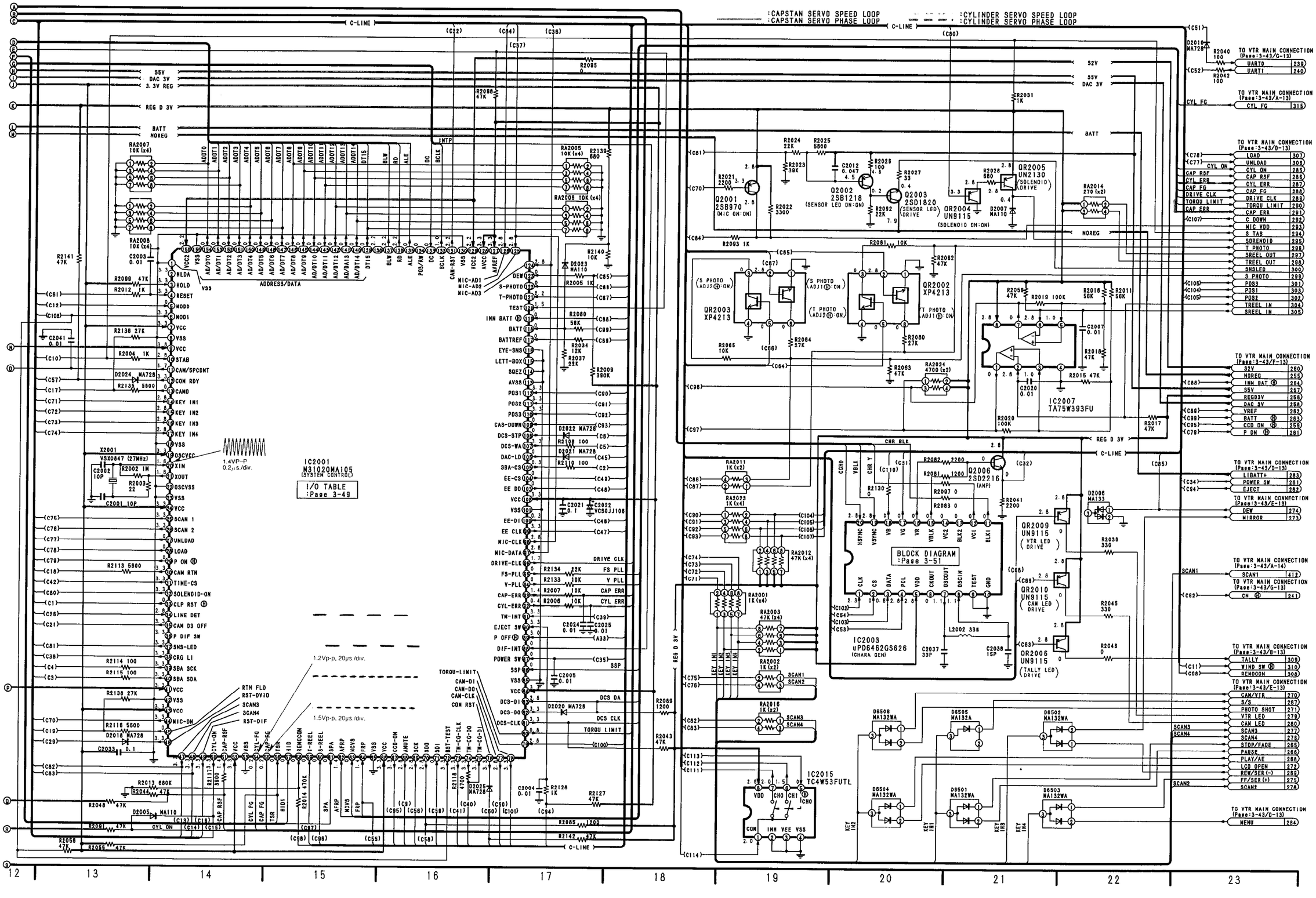
Back Page:
POWER Section


SYSTEM CONTROL & SERVO (Page:3-45)
VIDEO1 (Page:3-56)
VIDEO2 (Page:3-57)
DIGITAL I/F (Page:3-63)
LCD (Page:3-61)
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

3-17. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM



Back Page:
VTR MAIN CONNECTION Section


:CAPSTAN SERVO SPEED LOOP
:CAPSTAN SERVO PHASE LOOP
:CYLINDER SERVO SPEED LOOP
:CYLINDER SERVO PHASE LOOP
C-LINE
5SV
DAC 3V
3.3V REG
REG D 3V
BATT
NOREG
ADDRESS/DATA
IC2001
M31020MA105
(SYSTEM CONTROL)
I/O TABLE
:Page 3-49
X2001
VSX0847 (27MHz)
1.4Vp-p
0.2μs./div.
1.2Vp-p, 20μs./div.
1.5Vp-p, 20μs./div.
IC2003
μPD6462GS626
(CHARA GEN)
BLOCK DIAGRAM
:Page 3-51
IC2007
TA75W393FU
IC2015
TC4W53FUTL
Q2001
2SB970
(MIC ON:ON)
Q2002
2SB1218
(SENSOR LED ON:ON)
Q2003
2SD1820
(SENSOR LED)
DRIVE
QR2004
UN9115
(SOLENOID ON:ON)
QR2005
UN2130
(SOLENOID)
DRIVE
QR2003
XP4213
QR2002
XP4213
QR2009
UN9115
(VTR LED)
DRIVE
QR2010
UN9115
(CAM LED)
DRIVE
QR2006
UN9115
(TALLY LED)
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(Page:3-43/A-13)
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CYL ERR 287
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TORQU LIMIT 290
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T PHOTO 296
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TREEL OUT 298
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SREEL IN 305
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DAC 3V 256
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TO VTR MAIN CONNECTION
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CN 241
TO VTR MAIN CONNECTION
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TO VTR MAIN CONNECTION
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PHOTO SHOT 271
VTR LED 278
CAM LED 280
SCAN3 277
SCAN4 278
STOP/FADE 285
PAUSE 268
PLAY/AE 286
LCD OPEN 272
REW/SER (-) 269
FF/SER (+) 275
SCAN2 276
TO VTR MAIN CONNECTION
(Page:3-43/D-13)
MENU 284

SYSTEM CONTROL I/O TABLE

IC2001 (M31020MA105): SYSTEMCONTROL MICROCOMPUTER

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	Vss	—	GND	60	S REEL	I	Supply Reel Pulse
2	HLDA	O	EXT-Bus Hold Acknowledge/BST TCK (CLK)	61	SPA	I	
3	HOLD	I	EXT-Bus Hold Request	62	AFRP	I	
4	RESET	I	Reset	63	MCVS	I	
5	MOD0	I	Single Chip Mode=Vss Vss	64	FRP	I	Frame Reference Pulse
6	MOD1	I	Memory Extend Mode=Vss Vcc	65	Vss	—	GND
7	Vcc	—	Voltage	66	Vcc	—	Voltage
8	Vss	—	GND	67	CCD ON	O	Camera CCD On
9	Vcc	—	Voltage	68	AMUTE	O	
10	STAB	I	Safety Tab SW	69	SCLK3		
11	CAM/5PCONT	O	CAM/5P Select Signal	70	TXD 232C	O	232C/5P
12	COM RDY	O	RS-232C I/F Connect Timing	71	RXD 232C	I	232C/5P
13	CAMO	O		72	BST TEST	I	Boundary Scan Test SW
14	KEY IN1	I	Key Scan IN 1 /BST TD0 (data out)	73	TM CG CLK	O	Timer & Character Generator Serial Clock
15	KEY IN2	I	Key Scan IN 2 /BST TD1 (data in)	74	TM CG D0	O	Timer & Character Generator Serial Data Out
16	KEY IN3	I	Key Scan IN 3 /BST TMS (Test Mode Select)	75	TM CG D1	I	Timer & Character Generator Serial Data In
17	KEY IN4	I	Key Scan IN 4	76	COM RST	O	RS-232C I/F Reset
18	Vss	—	GND	77	CAM CLK	O	Camera Serial Clock
19	OSC Vcc	—	Voltage	78	CAM D0	O	Camera Serial Data Out
20	Xin	I	27MHz	79	CAM D1	I	Camera Serial Data In
21	Xout	O	27MHz	80	TORQU LIMIT	O	Capstan Torque Limit
22	OSC Vss	—	GND	81	DCS CLK	O	CAS & DVIO Serial Clock
23	Vss	—	GND	82	DCS D0	O	CAS & DVIO Serial Data Out
24	Vcc	—	Voltage	83	DCS DI	I	CAS & DVIO Serial Data In
25	SCAN 1	O	Key Scan Out 1	84	Vcc	—	Voltage
26	SCAN 2	O	Key Scan Out 2	85	Vss	—	GND
27	UNLOAD	O	Mecha Unload	86	SSP	I	Sector Start Pulse
28	LOAD	O	Mecha Load	87	POWER SW	I	Power SW
29	PON H	O	Power On Control	88	DIF INT	I	
30	CAM RTN	O	H: CAM 4.5MHz L: DV 1027MHz	89	EXT P ON H	I	Camera Remote Control Power
31	TIME CS	O	Timer Chip Select	90	EJECT SW	I	Eject SW
32	SQL ON	O	Solenoid On	91	TM INT	I	Timer Interrupt Request
33	VCP DISP	O	Y CLP Discharge	92	CYL ERR	O	Cylinder Error
34	LIN DET	I	Line in Signal Detect	93	CAP ERR	O	Capstan Error
35	CAM D3 OFF	O	CAM Power Manage (18MHz Power Control) H: ON	94	V PLL	O	Video PLL
36	P DIF SW	O	DIF Power Manage	95	FS PLL	O	FS PLL (ATF ERR for Linear Arrangement)
37	SNS LED	O	Tape Sensor LED	96	DRIVE CLK	O	Cylinder Drive Clock
38	CRG L1	O	Charge Clock Data Out ON/OFF	97	MIC DATA	I/O	MIC Data In/Out (12C)
39	SBA SCK	O	Sub Audio Serial	98	MIC CLK	O	MIC ON (MIC/Contact ID)
40	SBA SDA	O	Sub Audio Serial	99	EE CLK	O	EEPROM & DAC Clock
41	Vcc	—	Voltage	100	EE DI	I	EEPROM & DAC Data In
42	Vss	—	GND	101	Vss	—	GND
43	Vcc	—	Voltage	102	Vcc	—	Voltage
44	MID ON	O	MIC ON (MIC/Contact ID)	103	EE DO	O	EEPROM & DAC Data Out
45	RTN FLD	O	Field Detect	104	EE DS	O	EEPROM Chip Select
46	RST DVIO	O	DV10, CAS, EDA Reset	105	SBA CS	O	Sub Audio Chip Select
47	SCAN 3	O	Key Scan Out 3	106	DAC LD	O	DAC Load
48	SCAN 4	O	Key Scan Out 4	107	DCS WA	O	DCS Serial Start
49	RST DIF	O	DIF LSI Reset	108	DCS STP	O	DCS Serial Stop
50	CYL ON	O	Cylinder On	109	CAP DWN	I	Cassette Down SW
51	CAP RSF	O	Capstan On	110	POS3	I	Mecha Position SW3
52	Vcc	—	Voltage	111	POS2	I	Mecha Position SW2
53	Vss	—	GND	112	POS1	I	Mecha Position SW1
54	CYL FG	I	Cylinder FG	113	AVss	—	GND
55	CAP FG	I	Capstan FG	114	SQEZ	I	SQEZ
56	TSR	I	Track Start Referene	115	LETT BOX	I	Letter Box Detect
57	HID	I	HSW	116	EVE SNS	I	Eye Sensor Detect
58	REMODON	I	Remote Control Pulse	117	Vref	I	Battery Reference
59	T REEL	I	Take Up Reel Pulse	118	BATT H	I	Battery Voltage Detect

Back Page:
SYSTEM CONTROL & SERVO Section

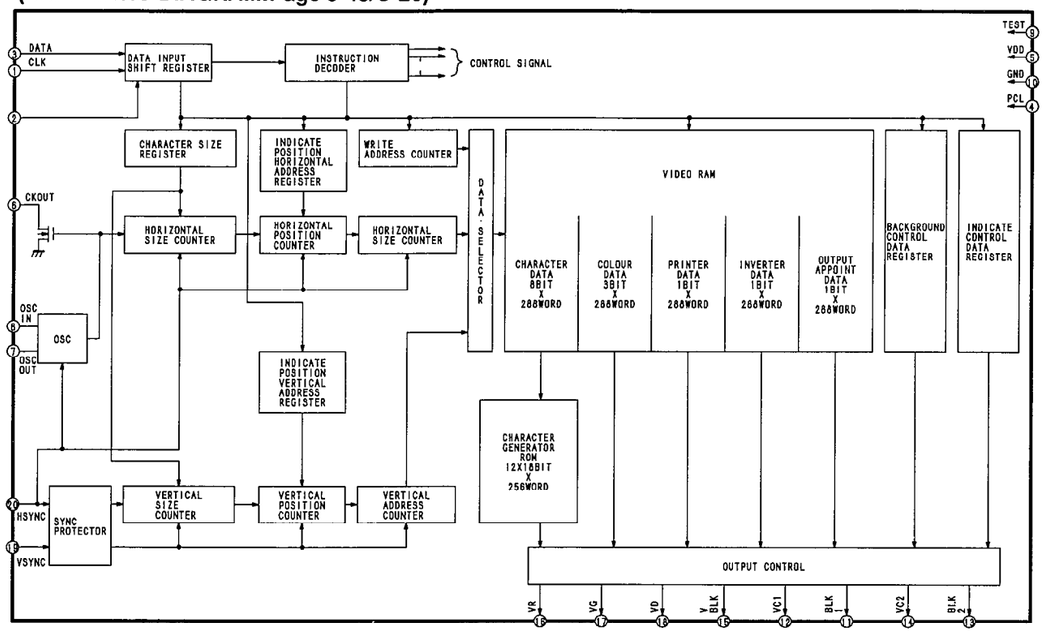
PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
119	INN BATT H	I	INN. BATT/EXT. BATT Detect	138	BHW	O	
120	TEST0	I	Test SW	139	DT15	I/O	EXT-Memory Address/Data BUS
121	DEW	I	Dew Detect	140	ADDT14	I/O	EXT-Memory Address/Data BUS
122	T PHOT	I	Tape Take-up Photo Sensor Detect	141	ADDT13	I/O	EXT-Memory Address/Data BUS
123	S PHOT	I	Tape Supply Photo Sensor Detect	142	ADDT12	I/O	EXT-Memory Address/Data BUS
124	MIC AD3	I	Contact ID Detect 3	143	ADDT11	I/O	EXT-Memory Address/Data BUS
125	MIC AD2	I	Contact ID Detect 2	144	ADDT10	I/O	EXT-Memory Address/Data BUS
126	MIC AD1	I	Contact ID Detect 1	145	ADDT9	I/O	EXT-Memory Address/Data BUS
127	Avref			146	ADDT8	I/O	EXT-Memory Address/Data BUS
128	AVcc	—	Voltage	147	ADDT7	I/O	EXT-Memory Address/Data BUS
129	Vcc2	—	Voltage	148	ADDT6	I/O	EXT-Memory Address/Data BUS
130	Vss	—	GND	149	ADDT5	I/O	EXT-Memory Address/Data BUS
131	CAM RST	O	Camera Reset	150	ADDT4	I/O	EXT-Memory Address/Data BUS
132	BCLK	O		151	ADDT3	I/O	EXT-Memory Address/Data BUS
133	PINE	I	Data Complete for EXT-memory Mode	152	ADDT2	I/O	EXT-Memory Address/Data BUS
134	NC	O	(N.C.)	153	ADDT1	I/O	EXT-Memory Address/Data BUS
135	EDA, PINE	O	Address Latch Enable for EXT-Memory Mode	154	ADDT0	I/O	EXT-Memory Address/Data BUS
136	EDA	O	Read Strobe for EXT-Memory Mode	155	Vss	—	GND
137	EDA, PINE	O	Byte Low Write for EXT-Memory Mode	156	Vcc2	—	Voltage

IC2011 (D784037GK508): RS-232C INTERFACE MICROCOMPUTER

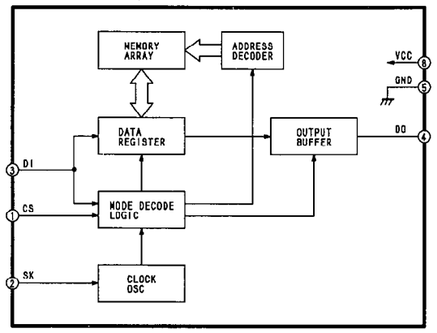
PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	EVR SCK	O	Serial Clock Signal for SYNC Serial Communication (To Camera Micom)	46	TEST	—	GND
				47	CGCS	O	CG CS
2	EVR SBO	O	Serial Data Signal for SYNC Serial Communication (To Camera Micom)	48	CGPCL	O	CG PCL
				49	P12	—	(N.C.)
5	VTR T	O	SYNC Serial Communication Enable Signal for Camera Micom	50	UARTI	I	RS-232C Data
				51	UARTO	O	RS-232C Data
7	RESET	I	Reset Signal	52	PCOE	O	RS-232C Driver Output Enable
8	VDD	—	VDD (+3V)	53	BACK RST	—	(N.C.)
9	X2	O	Oscillator (14.7456MHz)	54	TEST0	I	VTR Test Signal (H: Normal, L: Test Mode)
10	X1	I	Oscillator (14.7456MHz)				
11	GND	—	GND	55	VDD	—	VDD (+3V)
12	S TITLE L	O	Sound Effect Control Signal	56	PC RST	I	Reset Signal Detect (AD Input)
13	LR CONT	O	LCD Driver Control (L/R Invert)	60	STBY	I	RS-232C Cable Connect Confirm
14	UD CONT	O	LCD Driver Control (U/D Invert)	61	BACK DET	—	GND
15	LCD P SAVE	—	(N.C.)	64	AVDD	—	Voltage for AD Converter (+3V)
17	INSEL	—	(N.C.)	65	AVREF1	—	Refference Voltage for AD Converter (+3V)
18	TALLY	O	TALLY LED Control				
19	A LINE H	—	(N.C.)	66	AVSS	—	GND for AD Converter
20	T PH AD2	O	Take μ	67	ANO0	—	(N.C.)
21	T PH AD1	O	Take μ	68	ANO1	—	(N.C.)
22	S PH AD2	O	Supply Tape Sensor	69	AVREF2	—	GND
23	S PH AD1	O	Supply Tape Sensor	70	AVREF3	—	GND
24	EYE P SAVE	—	(N.C.)	71	P20	—	GND
25	LCD WIDE	O	LCD Driver Wide Select	72	CAM T	I	Camera Service/232C Micom Select Signal (H: 232C, L: Camera Service)
26	SPK ON H	O	Speaker ON				
27	WIDNSW H	O	Noise Silent	73	FRP	I	Frame SYNC Signal
28	VTR LED	O	VTR Mode LED	76	SCK	I	Serial Clock Signal for SYNC Serial Communication (To VTR Micom)
29	CAM LED	O	CAMERA Mode LED				
30	VCO H	O	VCO Test Mode Ⓗ	77	COM RDY	I	SYNC Serial Communication Enable Signal for VTR Micom
31	LCD BL CONT	O	LCD Back Light Control Signal				
32	BL BRIGHT H	O	Back Light Bright Control Signal	78	EVR SDI	I	Serial Data Input for SYNC Serial Communication (To Camera Micom)
33	EVF BL CONT	O	EVF Back Light Control Signal				
34	EVF ON	O	EVF ON	79	SDI	I	Serial Data for SYNC Serial Communication (To VTR Micom)
35	LCD ON	O	LCD ON				
44	CLKOUT	—	(N.C.)	80	SDO	O	Serial Data for SYNC Serial Communication (To VTR Micom)
45	GND	—	GND				

SYSTEM CONTROL IC BLOCK

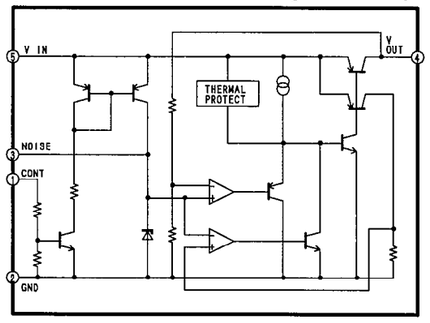
IC2003: uPD6462GS626
(SCHEMATIC DIAGRAM:Page 3-48/C-20)



IC2005: S29L330AFST
(SCHEMATIC DIAGRAM:Page 3-46/E-10)

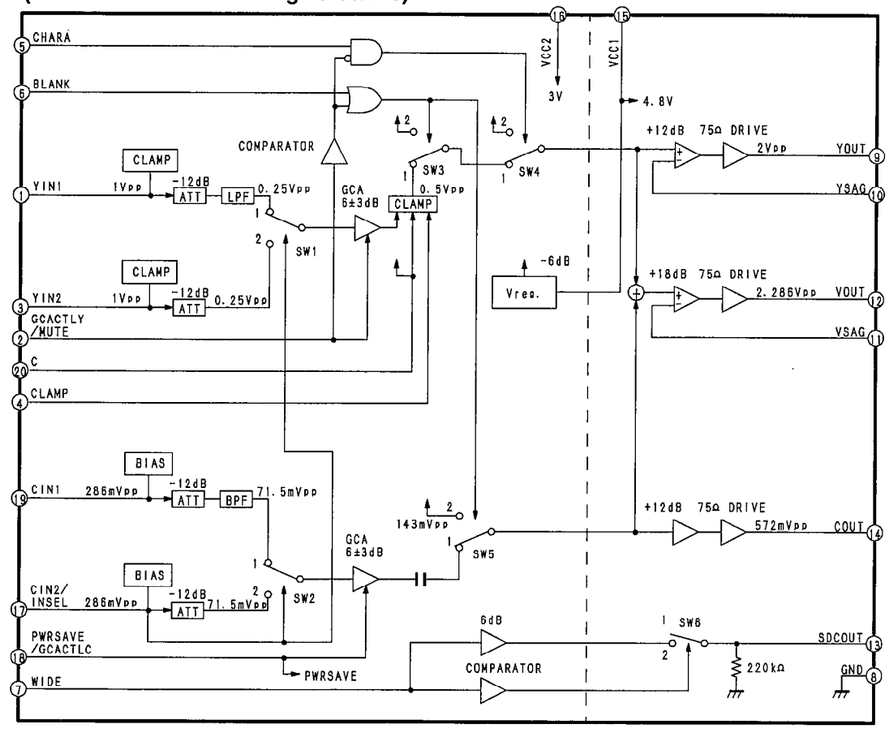


IC2013:MM1320ENRE
(SCHEMATIC DIAGRAM:Page 3-46/A-9)

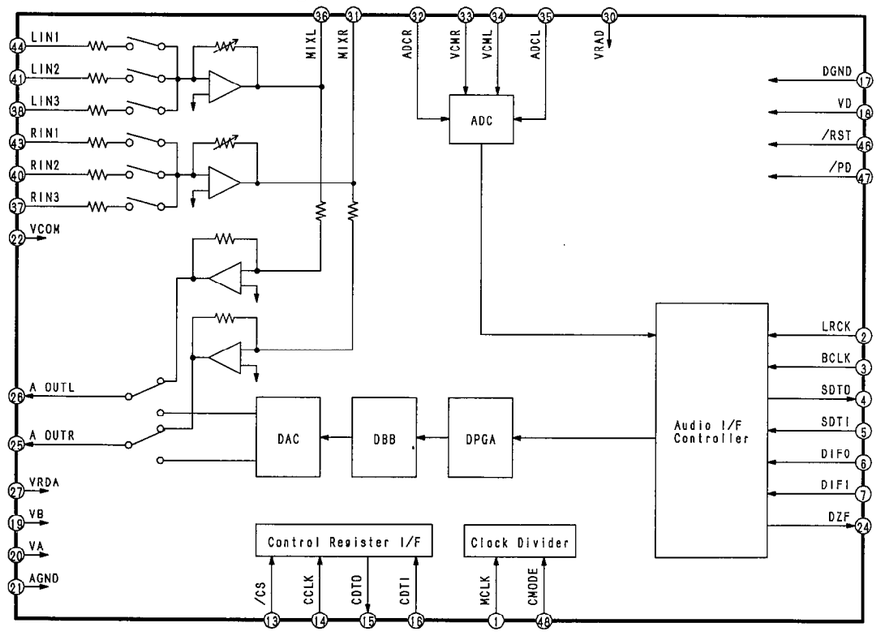


VIDEO 1 IC BLOCK

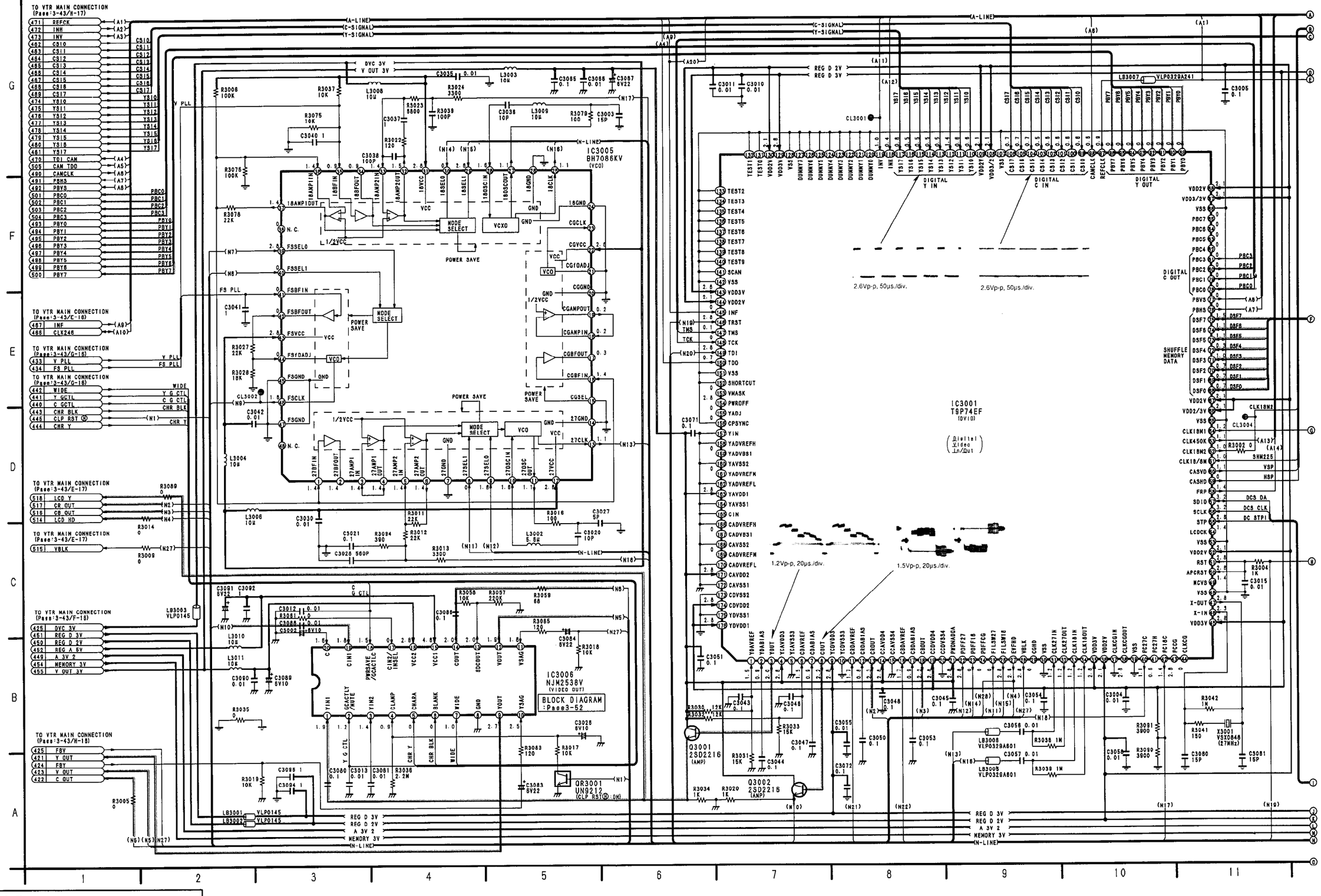
IC3006: NJM2538V
(SHEMATIC DIAGRAM:Page 3-53/B-5)



IC4501: AK4513
(SCHEMATIC DIAGRAM:Page 3-56/C-19)



3-18. VIDEO 1 SCHEMATIC DIAGRAM



Back Page:
SYSTEM CONTROL & SERVO Section

:VIDEO MAIN SIGNAL PATH IN REC MODE
:VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
:AUDIO MAIN SIGNAL PATH IN REC MODE
:AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

IC3007
LZ9FC144
(CHR AMP)

IC3002
MN47V07AF
(SHUFFLE MEMORY)

IC3003
MN67373
(CAS)
Compression
Audio process
Shuffle

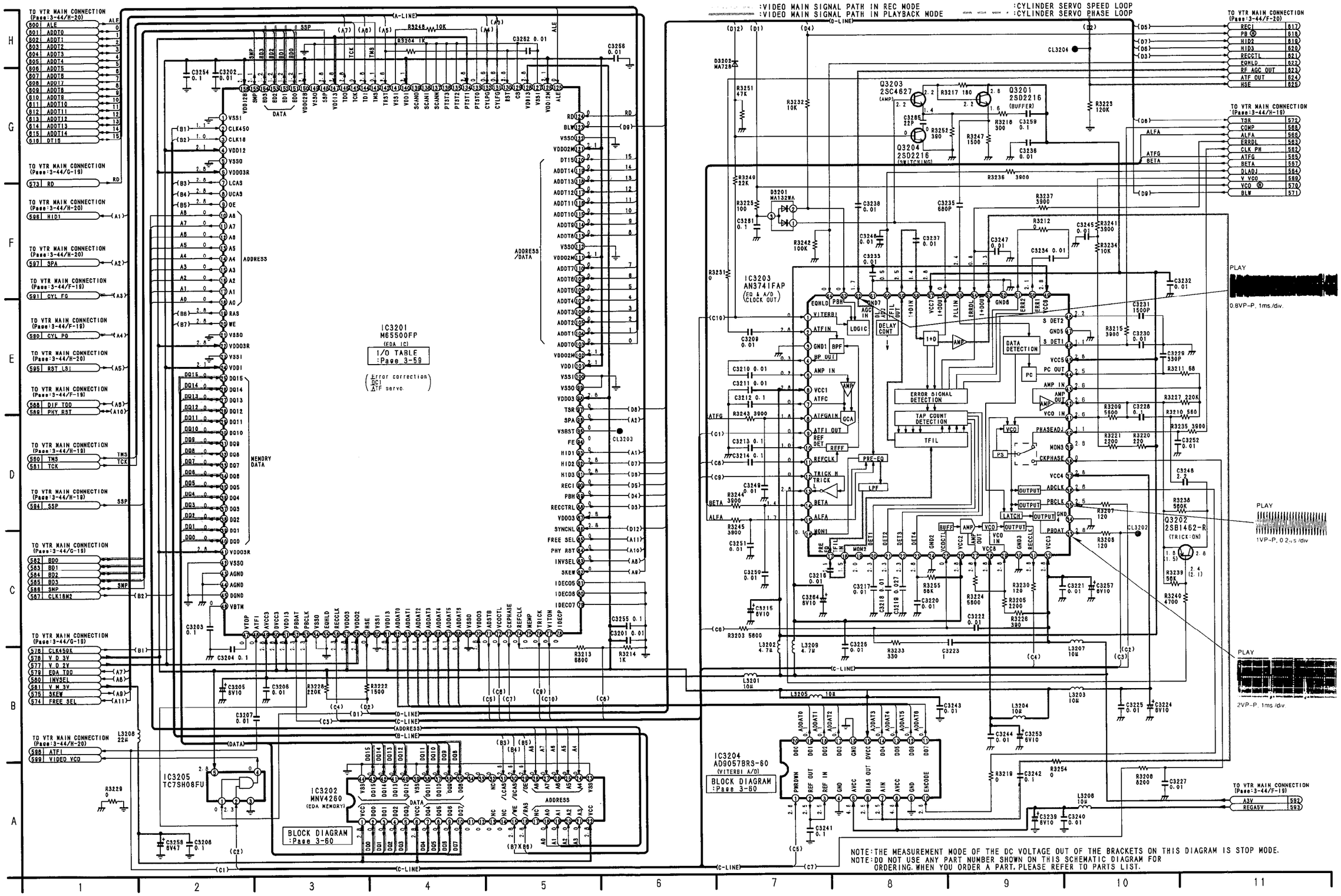
IC4501
AK4513
(AUDIO I/F)

BLOCK DIAGRAM
:Page 3-52

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERRING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.

3-19. VIDEO 2 SCHEMATIC DIAGRAM


:VIDEO MAIN SIGNAL PATH IN REC MODE
:VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
:CYLINDER SERVO SPEED LOOP
:CYLINDER SERVO PHASE LOOP
IC3201 M65500FP (EDA IC)
I/O TABLE :Page 3-59
IC3203 AN3741FAP (ED & A/D CLOCK OUT)
IC3204 AD9057BRS-60 (VITERBI A/D)
IC3205 TC7SH08FU
IC3202 MNV4260 (EDA MEMORY)
BLOCK DIAGRAM :Page 3-60
Q3203 2SC4627 (AMP)
Q3201 2SD2216 (BUFFER)
Q3204 2SD2216 (SWITCHING)
Q3202 2SB1462-R (TRICK ON)
PLAY
0.8VP-P, 1ms/div.
1VP-P, 0.2μs/div
2VP-P, 1ms/div.
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page: VIDEO 1 Section

VIDEO 2 I/O TABLE

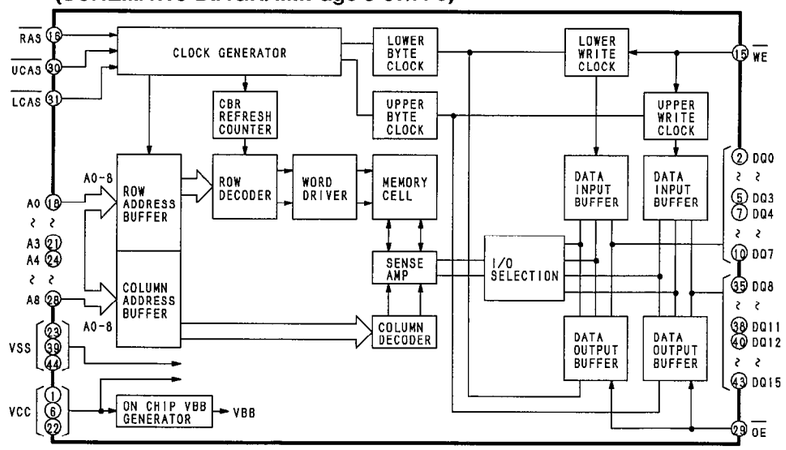
IC3201 (M65500FP): EDA

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	VSSI	—	VSS for Input Buffer & Inside Logic	57	VDDO3	—	VDD (3V) for Output Buffer
2	CLK450	I	Clock	58	VDDO2	—	VDD (2V) for Output Buffer
3	CLK18	I	Clock	59	HSE	O	
4	VDD12	—	VDD (2V) for Input & Inside Logic	60	VSSI	—	VSS for Input Buffer & Inside Logic
5	VSSO	—	VSS (Output Buffer)	61	VDDI3	—	VDD (3V) for Input Buffer
6	VDDO3R	—	VDD (Output Buffer)	62	ADDAT(0)	I	
7	LCAS	O	2/3V Select Correspond (DRAM I/F)	63	ADDAT(1)	I	
8	UCAS	O	2/3V Select Correspond (DRAM I/F)	64	ADDAT(2)	I	
9	OE	O	2/3V Select Correspond (DRAM I/F)	65	ADDAT(3)	I	
10	A(8)	O	2/3V Select Correspond (DRAM I/F)	66	ADDAT(4)	I	
11	A(7)	O	2/3V Select Correspond (DRAM I/F)	67	ADDAT(5)	I	
12	A(6)	O	2/3V Select Correspond (DRAM I/F)	68	ADDAT(6)	I	
13	A(5)	O	2/3V Select Correspond (DRAM I/F)	69	VSSO	—	(N.C.)
14	A(4)	O	2/3V Select Correspond (DRAM I/F)	70	VDDO3	—	(N.C.)
15	A(3)	O	2/3V Select Correspond (DRAM I/F)	71	ADSTB	O	
16	A(2)	O	2/3V Select Correspond (DRAM I/F)	72	VCOCTL	O	
17	A(1)	O	2/3V Select Correspond (DRAM I/F)	73	CKPHASE	O	
18	A(0)	O	2/3V Select Correspond (DRAM I/F)	74	REFCLK	O	
19	RAS	O	2/3V Select Correspond (DRAM I/F)	75	MEMP	—	(N.C.)
20	WE	O	2/3V Select Correspond (DRAM I/F)	76	TRICK	O	
21	VSSO	—	VSS for Output Buffer	77	VTTON	O	
22	VDDO3R	—	VDD for Output Buffer (DRAM I/F: 2/3V Select Correspond)	78	IDECP	—	(N.C.)
				79	IDECO(7)	I/O	
23	VSSI	—	VSS for Input Buffer & Inside Logic	80	IDECO(6)	I/O	
24	VDDI	—	VDD (2V) for Input & Inside Logic	81	IDECO(5)	I/O	
25	DQ(15)	I/O	2/3V Select Correspond (DRAM I/F)	82	IDECO(4)	I/O	
26	DQ(14)	I/O	2/3V Select Correspond (DRAM I/F)	83	IDECO(3)	I/O	
27	DQ(13)	I/O	2/3V Select Correspond (DRAM I/F)	84	IDECO(2)	I/O	
28	DQ(12)	I/O	2/3V Select Correspond (DRAM I/F)	85	IDECO(1)	I/O	
29	DQ(11)	I/O	2/3V Select Correspond (DRAM I/F)	86	IDECO(0)	I/O	
30	DQ(10)	I/O	2/3V Select Correspond (DRAM I/F)	87	VDDO3	—	VDD (3V) for Output Buffer
31	DQ(9)	I/O	2/3V Select Correspond (DRAM I/F)	88	RECCTRL	O	
32	DQ(8)	I/O	2/3V Select Correspond (DRAM I/F)	89	PBH	O	
33	DQ(7)	I/O	2/3V Select Correspond (DRAM I/F)	90	RECI	O	
34	DQ(6)	I/O	2/3V Select Correspond (DRAM I/F)	91	HID3	O	
35	DQ(5)	I/O	2/3V Select Correspond (DRAM I/F)	92	HID2	O	
36	DQ(4)	I/O	2/3V Select Correspond (DRAM I/F)	93	HID1	O	
37	DQ(3)	I/O	2/3V Select Correspond (DRAM I/F)	94	FE	—	(N.C.)
38	DQ(2)	I/O	2/3V Select Correspond (DRAM I/F)	95	VSBST	O	
39	DQ(1)	I/O	2/3V Select Correspond (DRAM I/F)	96	SPA	O	
40	DQ(0)	I/O	2/3V Select Correspond (DRAM I/F)	97	TSR	O	
41	VDDR3R	—	VDD for Output Buffer (DRAM I/F: 2/3V Select Correspond)	98	VDDO3	—	VDD (3V) for Output Buffer
				99	VSSO	—	VSS for Output Buffer
42	VSSO	—	VSS for Output Buffer	100	VSSI	—	VSS for Input Buffer & Inside Logic
43	AGND	—	Analogue GND	101	VDDI	—	VDD (2V) for Input & Inside Logic
44	AGND	—	Analogue GND	102	VDDO2M	—	VDD for Output Buffer (MCU I/F: 2/3V Select Correspond)
45	DGND	—	Digital GND				
46	VBTM	—	Refference Analogue Voltage (BOTTOM)	103	ADDAT(0)	I/O	2/3V Select Correspond (MCU I/F)
				104	ADDAT(1)	I/O	2/3V Select Correspond (MCU I/F)
47	VTOP	—	Refference Analogue Voltage (TOP)	105	ADDAT(2)	I/O	2/3V Select Correspond (MCU I/F)
48	ATFI	I	Analogue Input (Vin: 1.0Vp-p)	106	ADDAT(3)	I/O	2/3V Select Correspond (MCU I/F)
49	AVCC3	—	Analogue VCC	107	ADDAT(4)	I/O	2/3V Select Correspond (MCU I/F)
50	DVCC3	—	Digital VCC	108	ADDAT(5)	I/O	2/3V Select Correspond (MCU I/F)
51	VDDI3	—	VDD (3V) for Low Amplitude Buffer	109	ADDAT(6)	I/O	2/3V Select Correspond (MCU I/F)
52	PBDAT	I	Low Amplitude Buffer	110	ADDAT(7)	I/O	2/3V Select Correspond (MCU I/F)
53	PBCLK	I	Low Amplitude Buffer	111	VDDO2M	—	VDD for Output Buffer (MCU I/F: 2/3V Select Correspond)
54	VSSO	—	VSS for Low Amplitude				
55	EQHLD	I	Low Amplitude Buffer	112	VSSO	—	VSS for Output Buffer
56	RECCLK	I	Low Amplitude Buffer	113	ADDT(8)	I/O	2/3V Select Correspond (MCU I/F)

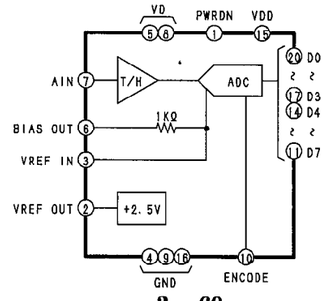
PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
114	ADDT(9)	I/O	2/3V Select Correspond (MCU I/F)	138	SCANI	I	SCAN DATA Input
115	ADDT(10)	I/O	2/3V Select Correspond (MCU I/F)	139	SCANO	—	(N.C.)
116	ADDT(11)	I/O	2/3V Select Correspond (MCU I/F)	140	VDDI	—	VDD (2V) for Input & Inside Logic
117	ADDT(12)	I/O	2/3V Select Correspond (MCU I/F)	141	VSSI	—	VSS for Input Buffer & Inside Logic
118	ADDT(13)	I/O	2/3V Select Correspond (MCU I/F)	142	TRST	I	BSCAN Reset Input
119	ADDT(14)	I/O	2/3V Select Correspond (MCU I/F)	143	TMS	I	BSCAN Mode Input
120	DT(15)	I/O	2/3V Select Correspond (MCU I/F)	144	TDI	I	BSCAN Data Input
121	VDDO2M	—	VDD for Output Buffer (MCU I/F: 2/3V Select Correspond)	145	TCK	I	BSCAN Clock Input
				146	TDO	O	BSCAN Data Output
122	VSSO	—	VSS for Output Buffer	147	VDDI3	—	VDD (3V) for Input Buffer
123	BLW	I	2/3V Select Correspond (MCU I/F)	148	SSP	I	
124	RD	I	2/3V Select Correspond (MCU I/F)	149	VSSO	—	VSS for Output Buffer
125	ALE	I	2/3V Select Correspond (MCU I/F)	150	VSDDO2B	—	VDD for Output Buffer (DVC BUS: 2/3V Select Correspond)
126	VDDI2M	—	VDD for Input Buffer (MCU I/F: 2/3V Select Correspond)				
127	VSSI	—	VSS for Input Buffer & Inside Logic	151	BD(0)	I/O	2/3V Select Correspond (DVC BUS I/F)
128	VDDI3	—	VDD (3V) for Input Buffer	152	BD(1)	I/O	2/3V Select Correspond (DVC BUS I/F)
129	CS	I					
130	RST	I		153	BD(2)	I/O	2/3V Select Correspond (DVC BUS I/F)
131	CYLFG	I					
132	CYKLPG	I		154	BD(3)	I/O	2/3V Select Correspond (DVC BUS I/F)
133	PTST(0)	I	IC-Test Control				
134	PTST(1)	I	IC-Test Control	155	SMP	I/O	2/3V Select Correspond (DVC BUS I/F)
135	PTST(2)	I	IC-Test Control				
136	PTST(3)	I	IC-Test Control	156	VDDI2B	—	VDD for Input Buffer (DVC BUS: 2/3V Select Correspond)
137	SCANM	I	SCAN MODE Select				

VIDEO 2 IC BLOCK

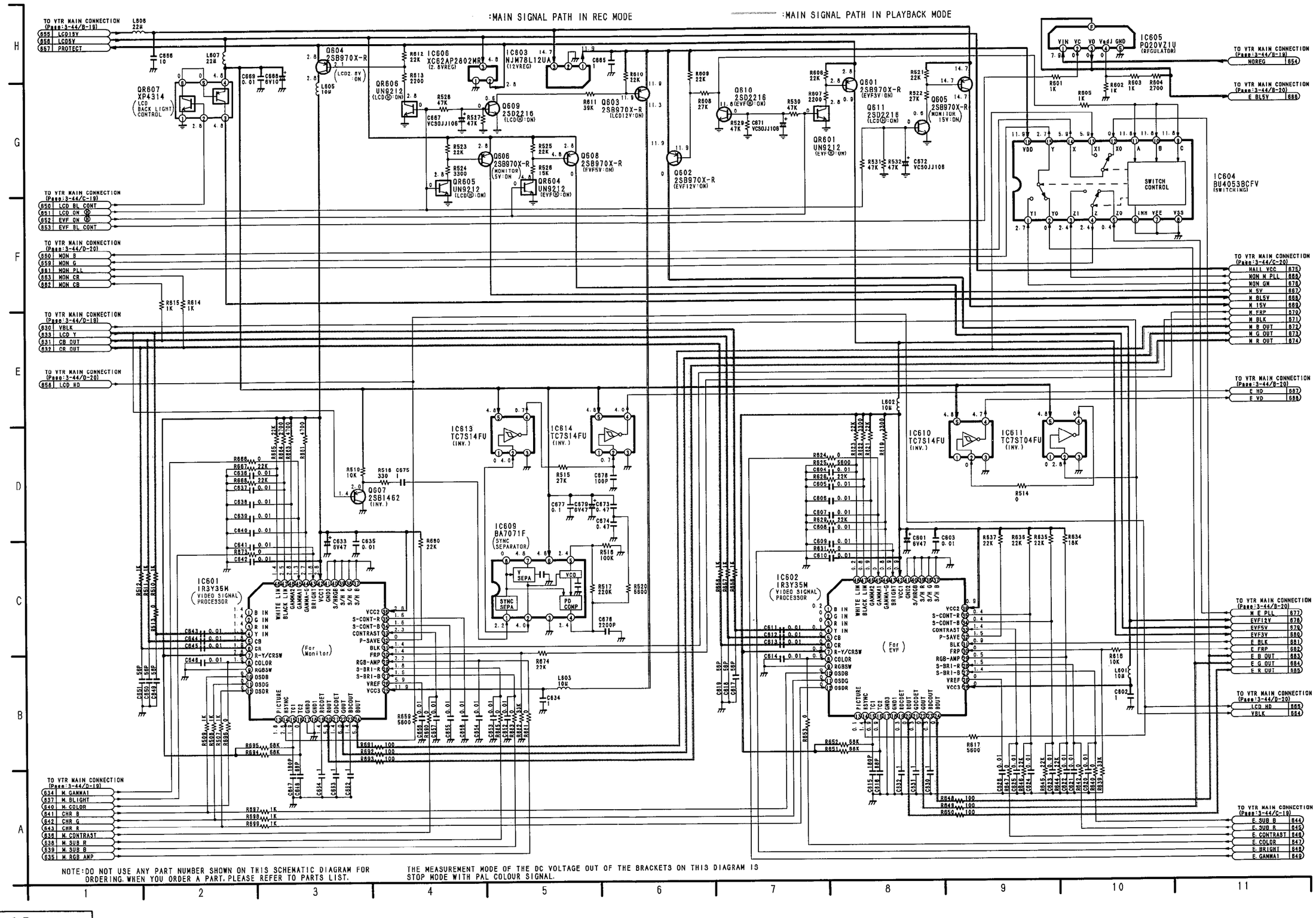
IC3202: MNV4260
(SCHEMATIC DIAGRAM:Page 3-57/A-3)



IC3204: AD9057BRS-60
(SHEMATIC DIAGRAM:Page 3-58/A-7)

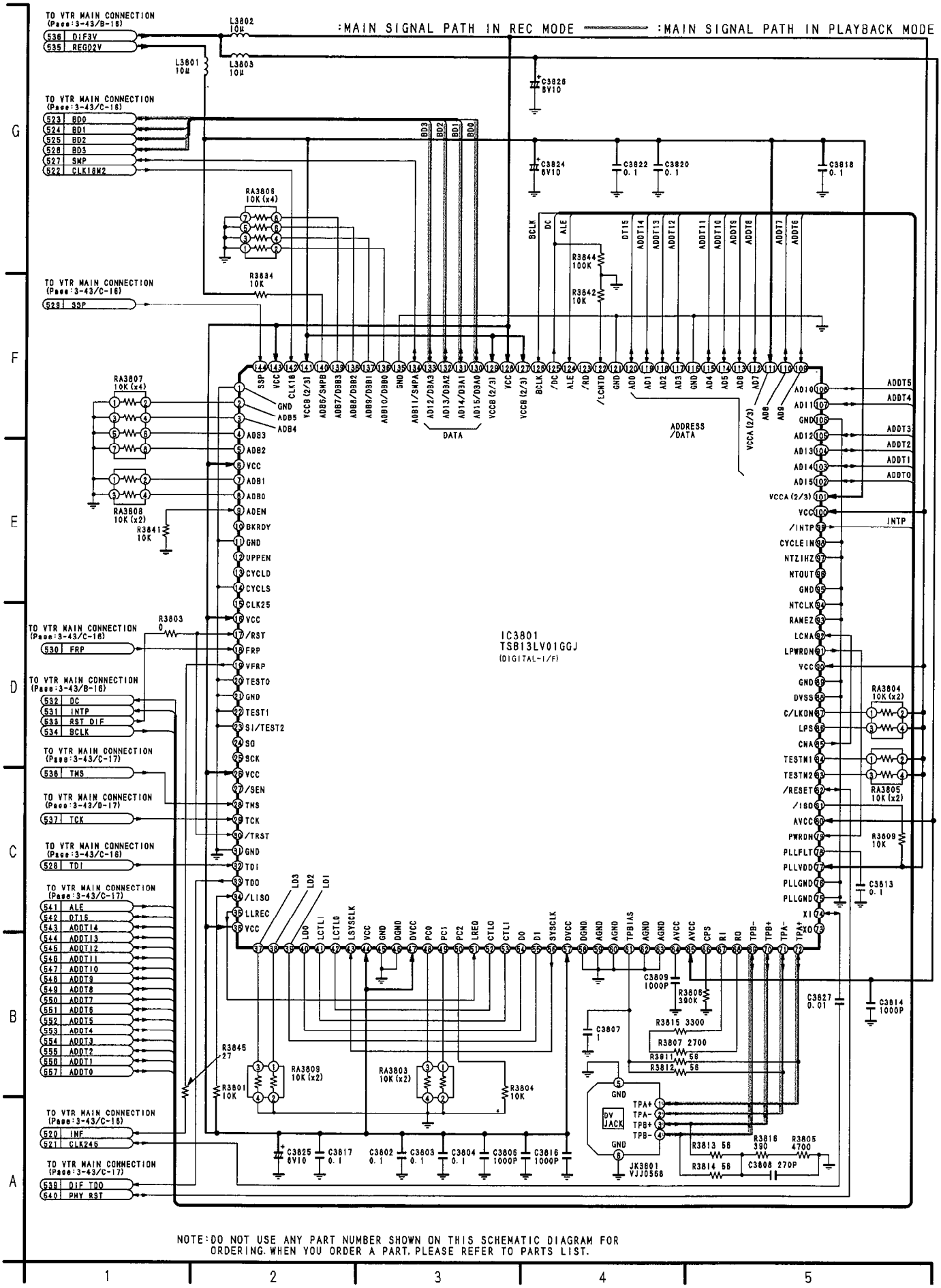


3-20. LCD SCHEMATIC DIAGRAM

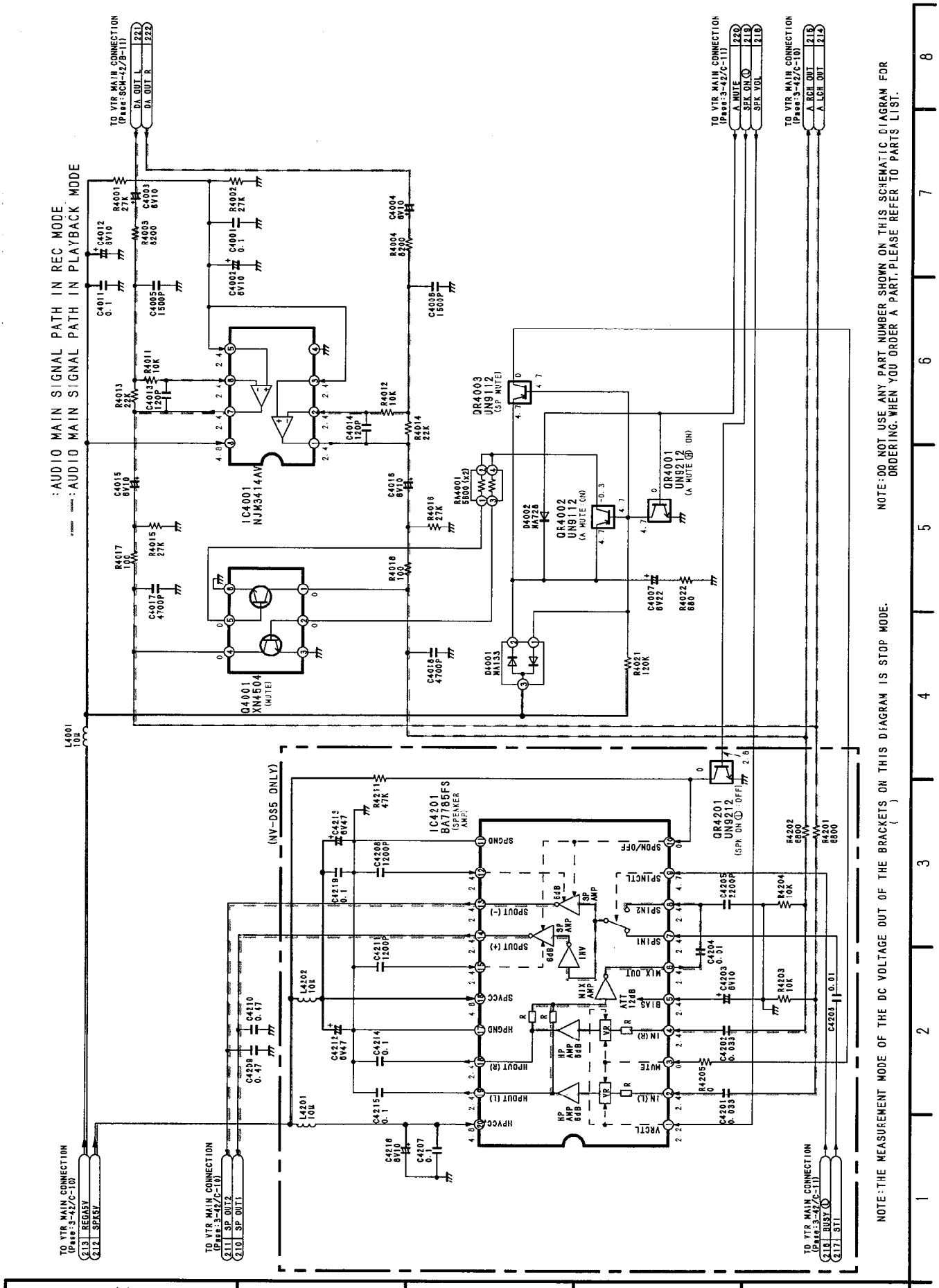


Back Page:
VIDEO 2 Section

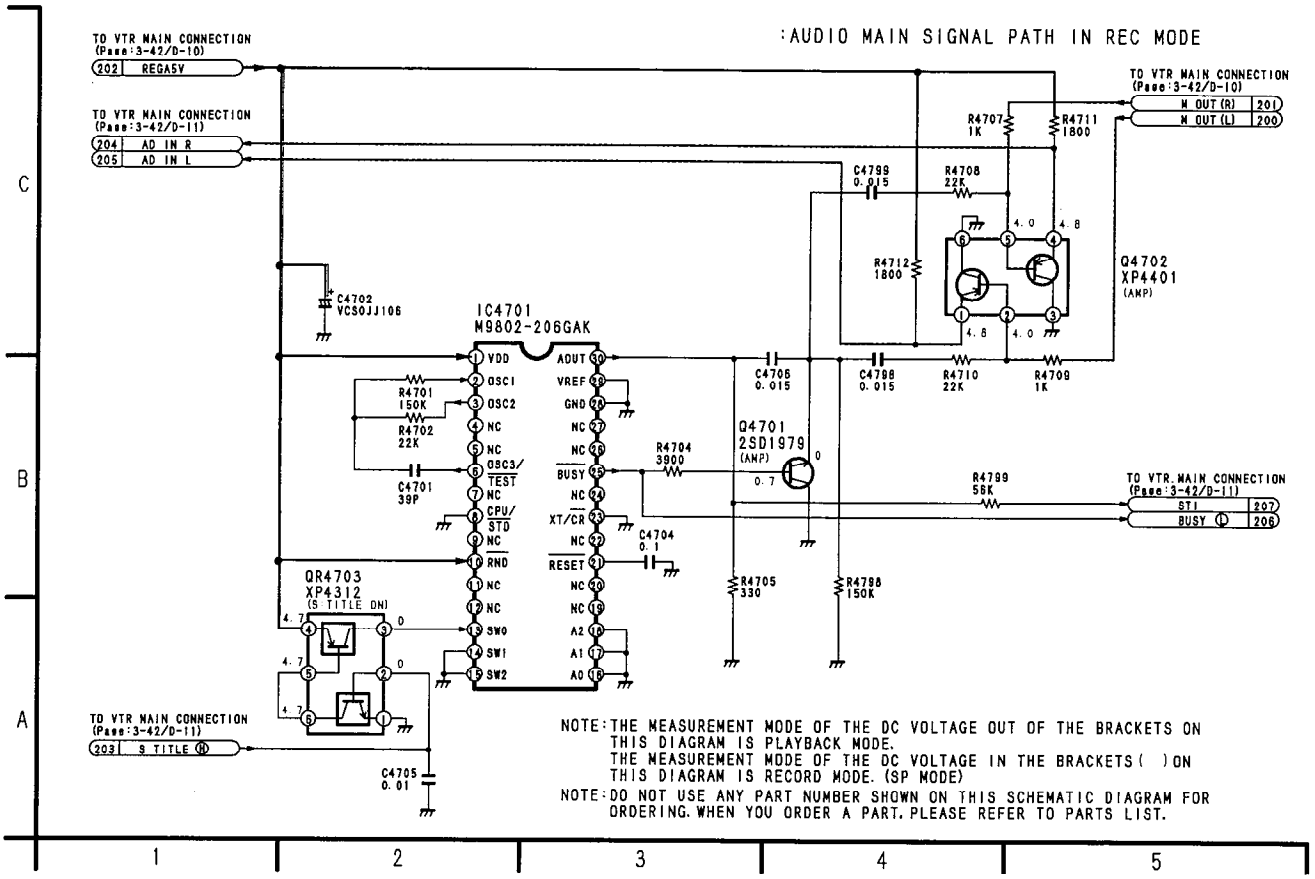
3-21. DIGITAL I/F SCHEMATIC DIAGRAM


:MAIN SIGNAL PATH IN REC MODE
:MAIN SIGNAL PATH IN PLAYBACK MODE
IC3801
TSB13LV01GGJ
(DIGITAL-I/F)
ADDRESS /DATA
DATA
JK3801 VJJ0568
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

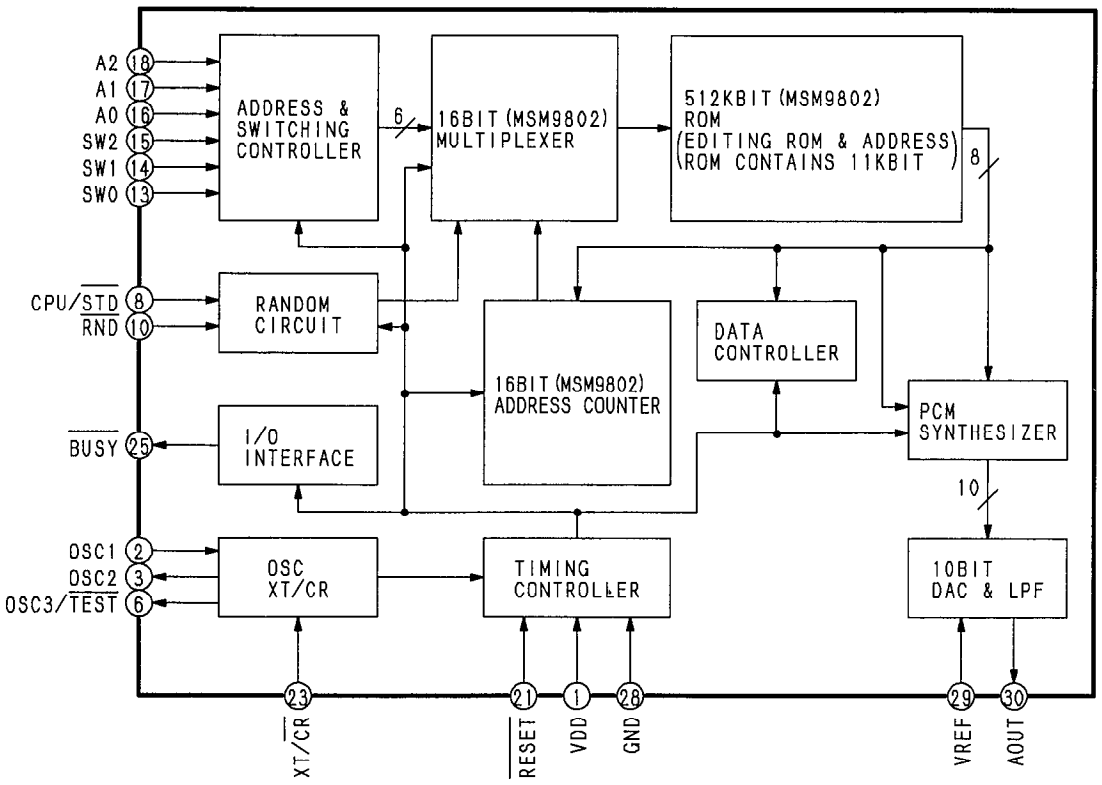
3-22. AUDIO SCHEMATIC DIAGRAM


: AUDIO MAIN SIGNAL PATH IN REC MODE
: AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
IC4001 NJM3414AV
Q4001 XN4504 (MUTE)
IC4201 BA7785FS (SPEAKER AMP)
(NV-D55 ONLY)
QR4001 UN9212 (A MUTE ON)
QR4002 UN9112 (A MUTE ON)
QR4003 UN9112 (SP MUTE)
QR4201 UN9212 (SPK ON OFF)
D4001 MA133
D4002 MA728
R4001 5600 (x2)
L4001 10μ
L4201 10μ
L4202 10μ
TO VTR MAIN CONNECTION (Page:3-42/C-11) DA OUT L 221 DA OUT R 222
TO VTR MAIN CONNECTION (Page:3-42/C-11) A MUTE 220 SPK ON 219 SPK VOL 218
TO VTR MAIN CONNECTION (Page:3-42/C-10) A RCH OUT 215 A LCH OUT 214
TO VTR MAIN CONNECTION (Page:3-42/C-10) 213 REG6.5V 212 SPK6V
TO VTR MAIN CONNECTION (Page:3-42/C-10) 211 SP OUT2 210 SP OUT1
TO VTR MAIN CONNECTION (Page:3-42/C-11) 218 BUSY 217 ST1
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE. ( )
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

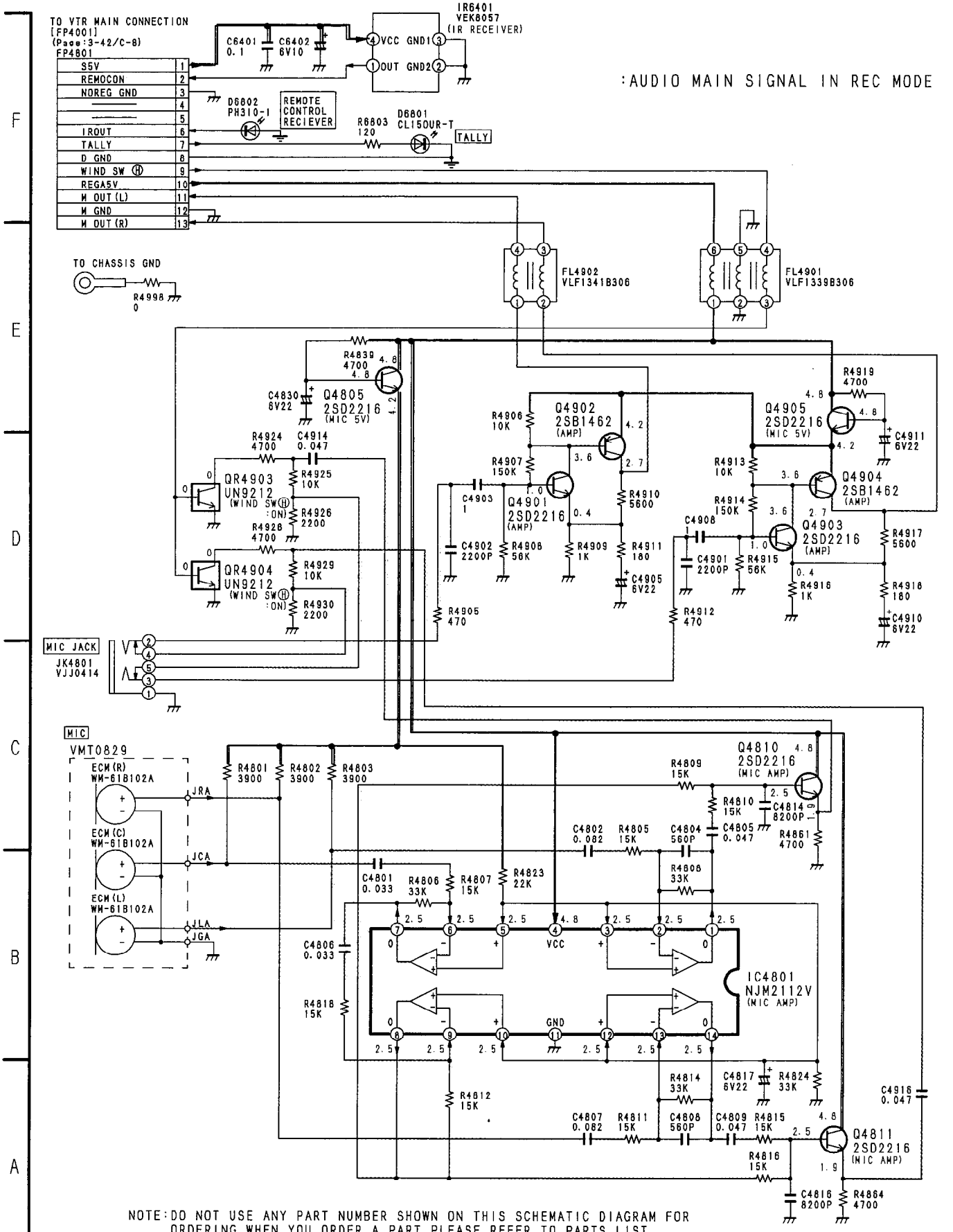
3-23. SOUND TITLE SCHEMATIC DIAGRAM


:AUDIO MAIN SIGNAL PATH IN REC MODE
TO VTR MAIN CONNECTION (Page:3-42/D-10)
202 REGA5V
TO VTR MAIN CONNECTION (Page:3-42/D-11)
204 AD IN R
205 AD IN L
TO VTR MAIN CONNECTION (Page:3-42/D-10)
M OUT(R) 201
M OUT(L) 200
IC4701 M9802-206GAK
Q4702 XP4401 (AMP)
Q4701 2SD1979 (AMP)
QR4703 XP4312 (S TITLE DN)
TO VTR MAIN CONNECTION (Page:3-42/D-11)
203 S TITLE
TO VTR.MAIN CONNECTION (Page:3-42/D-11)
ST1 207
BUSY 206
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE. (SP MODE)
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

IC4701: M9802-206GAK



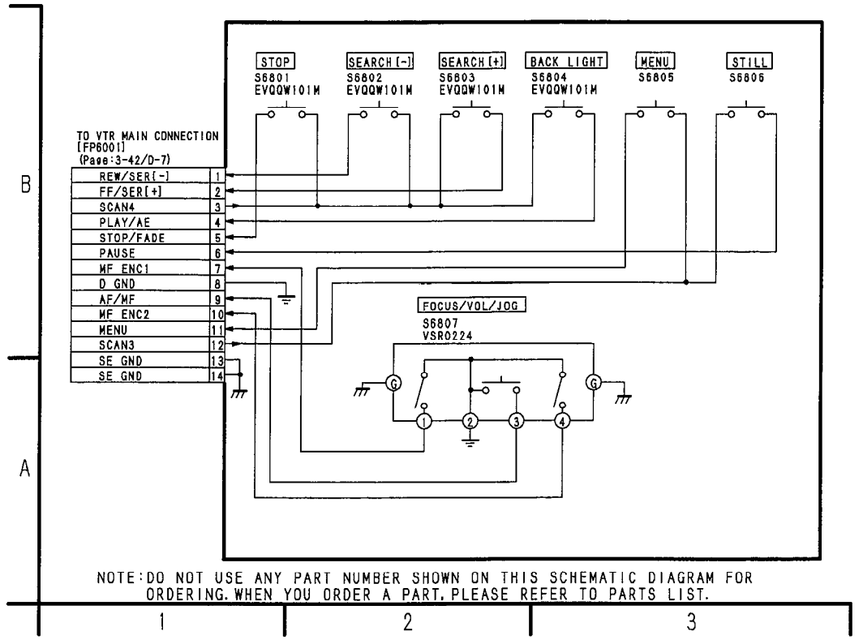
3-24. FRONT SCHEMATIC DIAGRAM



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

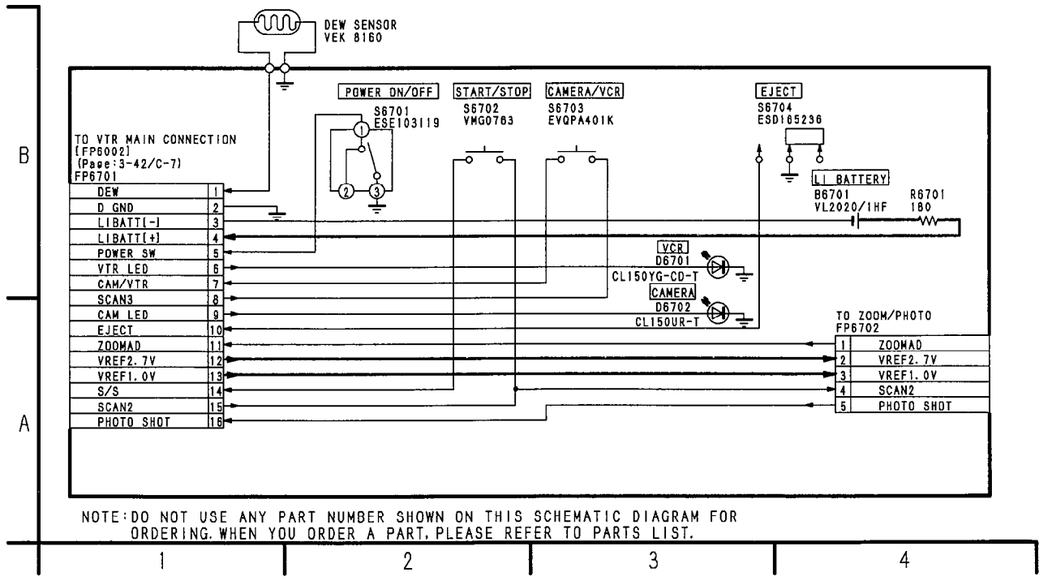
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS RECORD MODE.

3-25. TOP OPERATION SCHEMATIC DIAGRAM



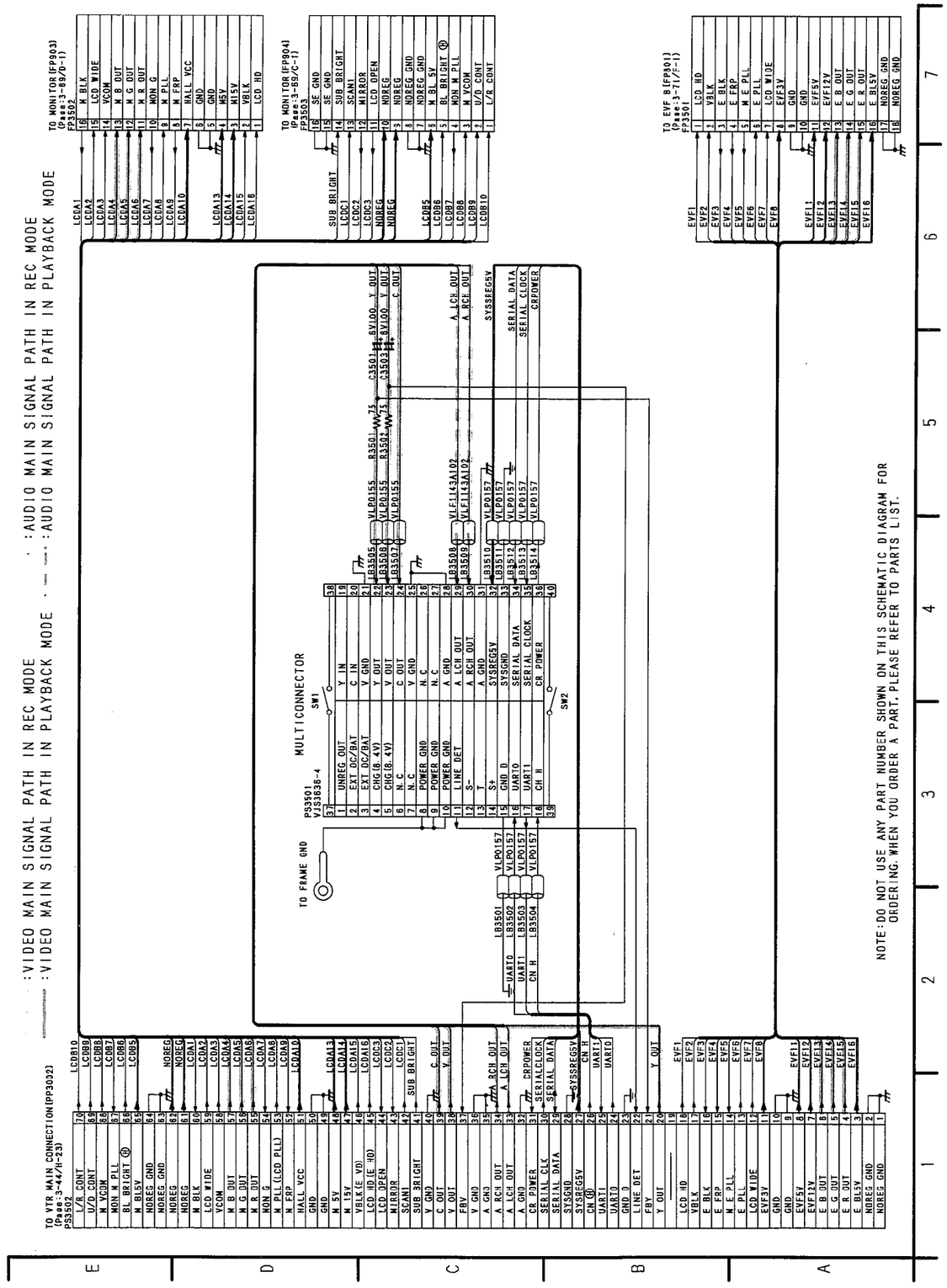
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-26. REAR OPERATION SCHEMATIC DIAGRAM



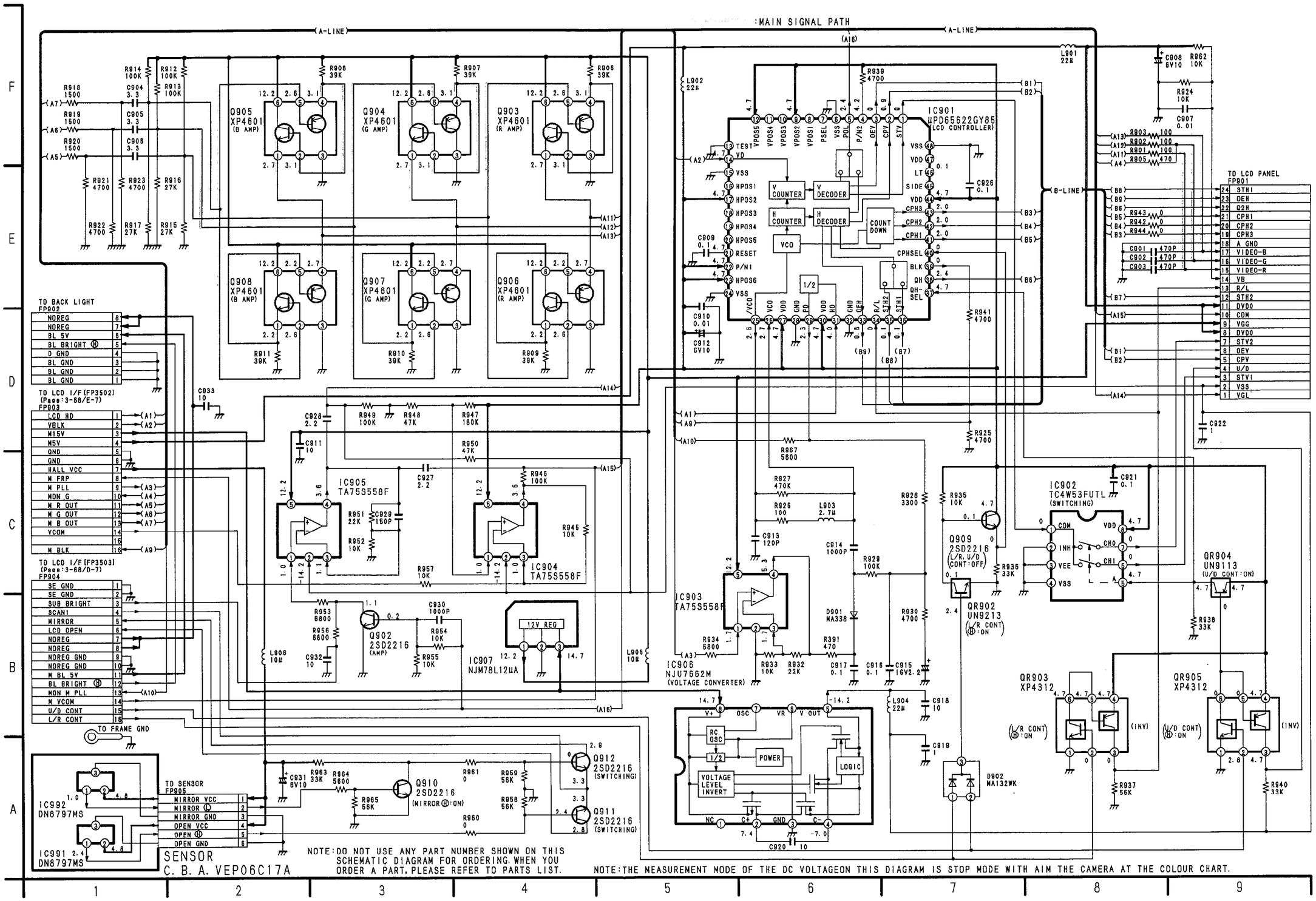
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-27. LCD I/F SCHEMATIC DIAGRAM



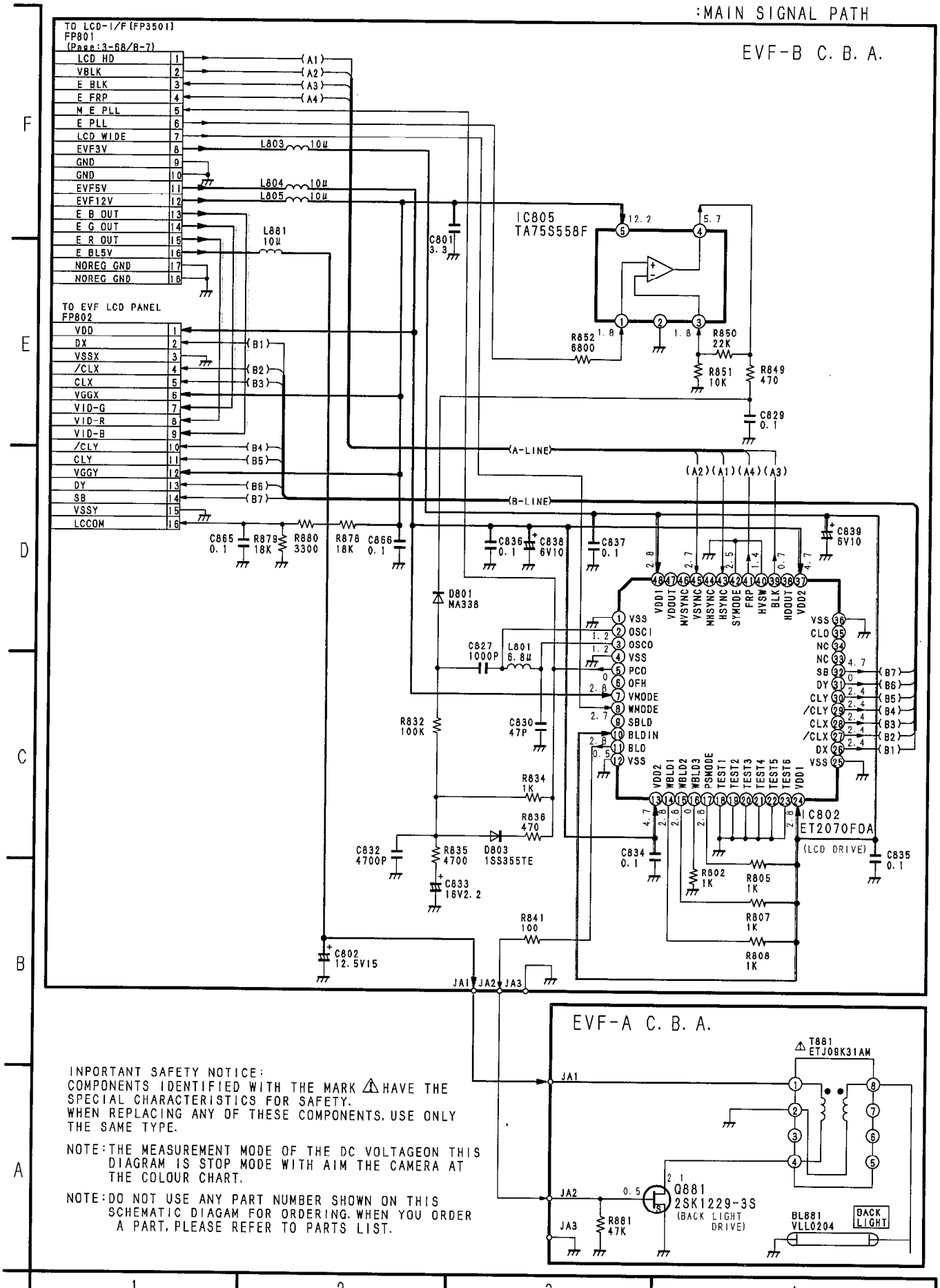
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-28. MONITOR & SENSOR FLEX. CARD SCHEMATIC DIAGRAM FOR NV-DS5



Back Page: TOP OPERATION / REAR OPERATION / LCD I/F Section

3-29. EVF (A) & (B) SCHEMATIC DIAGRAM

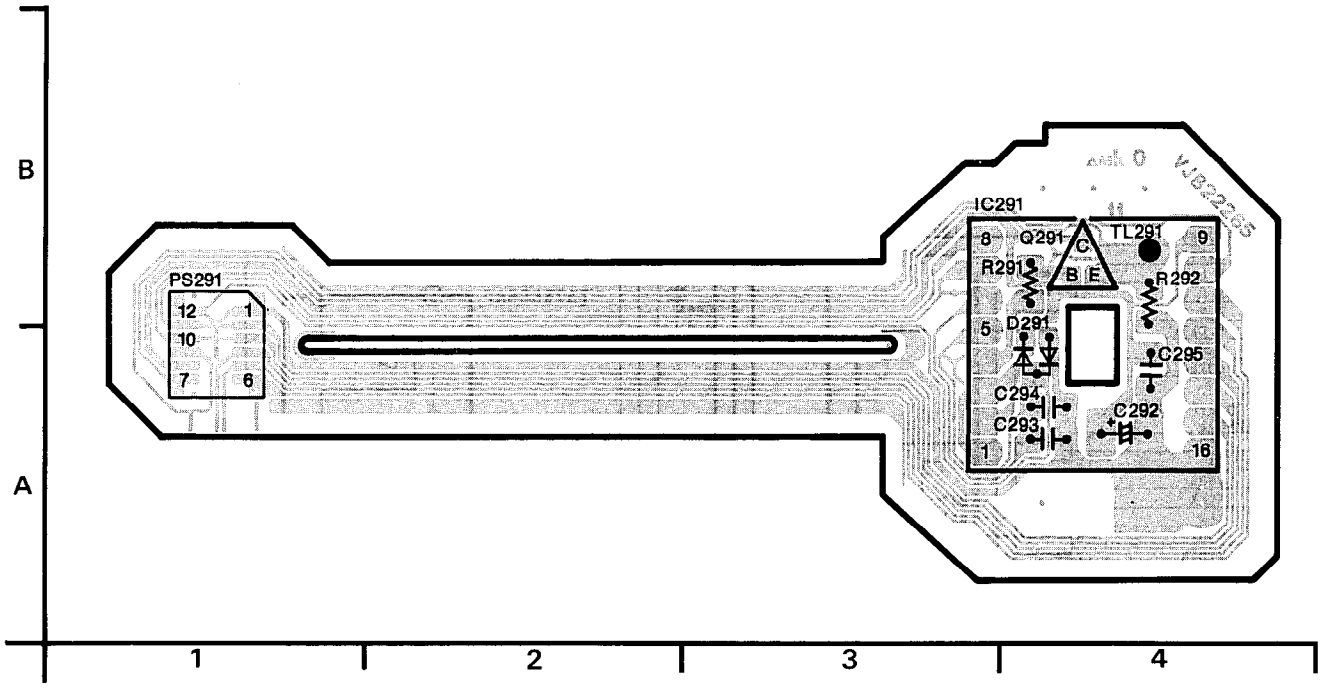


INPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

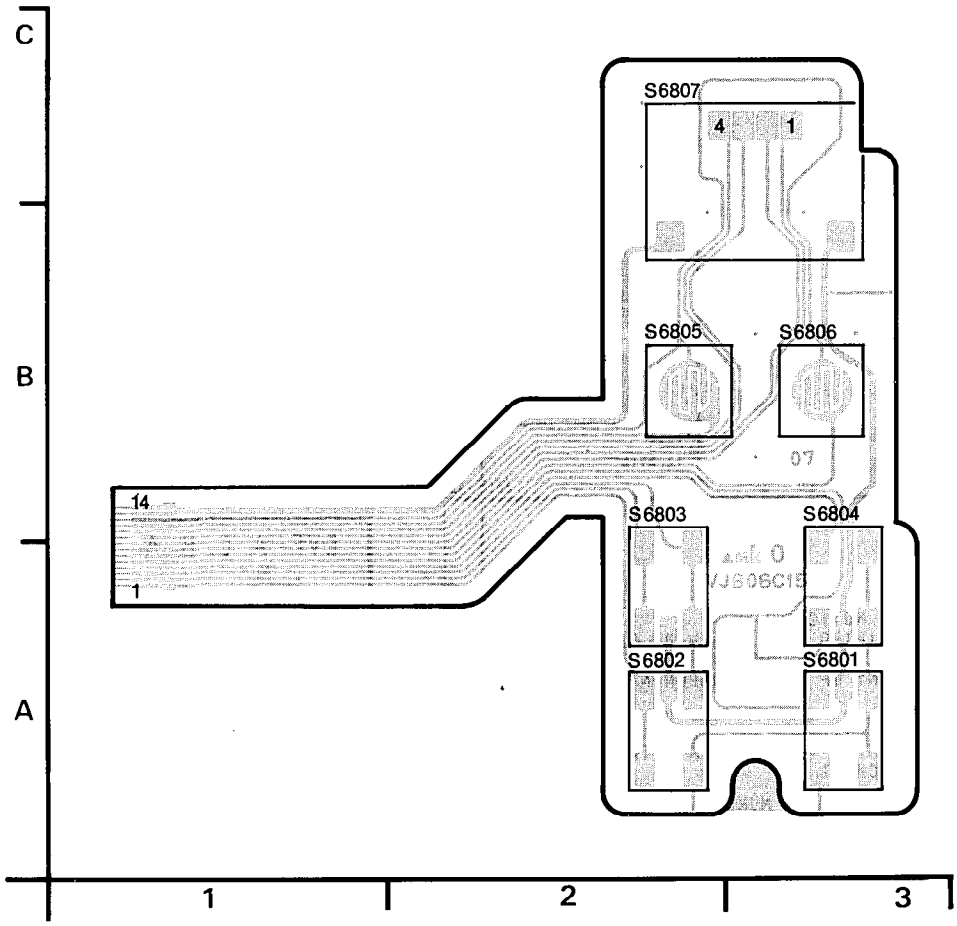
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGEON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE COLOUR CHART.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

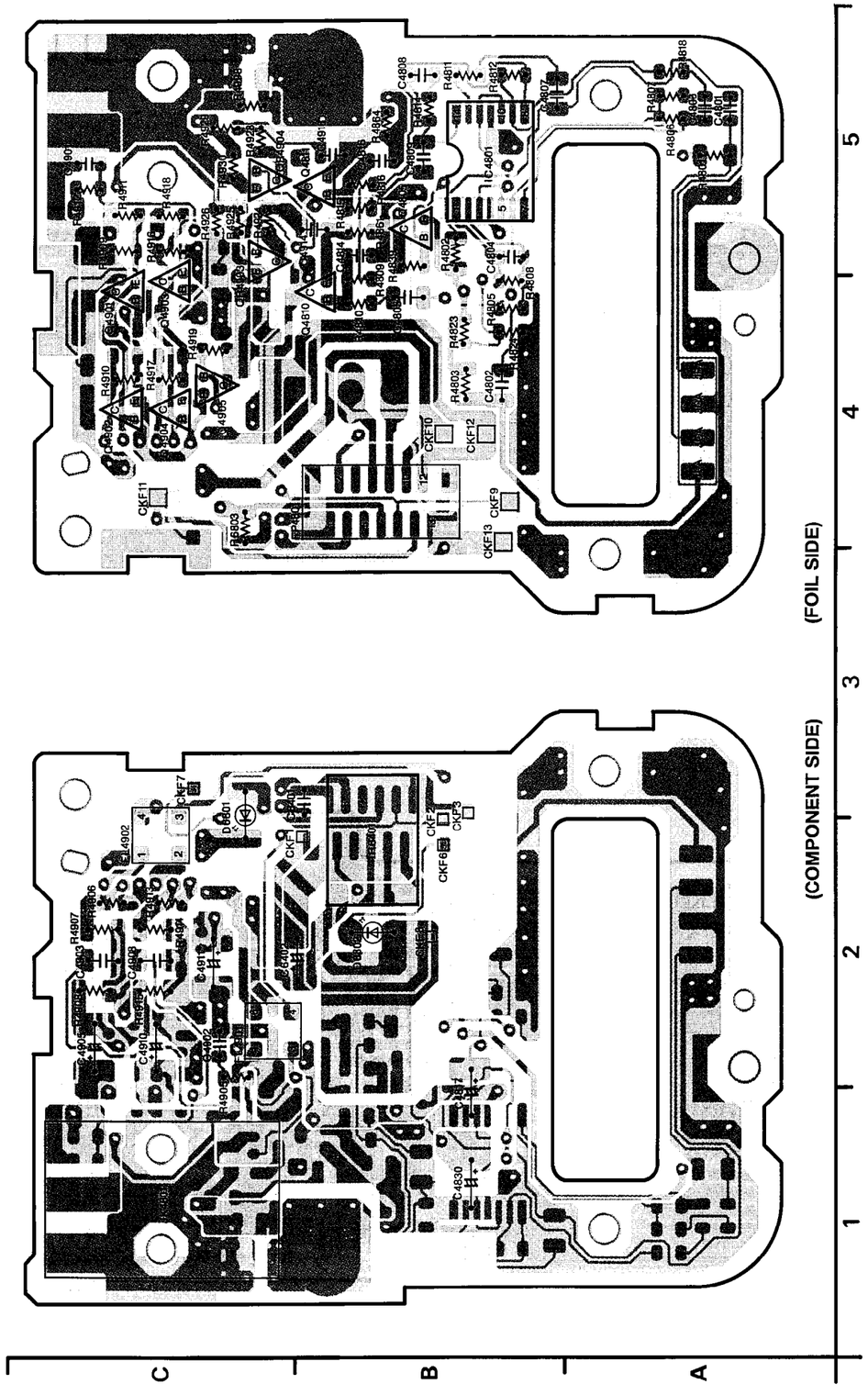
3-30. CCD FLEX. CARD C.B.A. (VEP22265A)



3-31. TOP OPERATION C.B.A. (VYK7917)



3-32. FRONT C.B.A. (VEP04674B)



CAMERA C.B.A.

Integrated Circuit	
IC101	B-7
IC201	D-3
IC202	B-12
IC203	B-11
IC204	A-5
IC205	C-2
IC207	A-5
IC210	C-3
IC301	A-2
IC302	C-6
IC303	C-4
IC304	A-1
IC305	C-5
IC306	D-5
IC308	D-6
IC309	D-7
IC313	D-5
IC314	D-5
IC317	C-6
IC319	C-6
IC457	D-1
IC702	D-2
IC703	C-1
IC704	A-6
IC705	C-2
IC706	A-6
IC707	C-2

Test Point	
CL201	A-5
CL202	B-5
CL302	B-1
CL318	A-3
CL701	A-7
CL702	A-6
CL703	A-6

Transistor	
Q101	A-7
Q201	C-4
Q202	B-4
Q203	A-4
Q302	D-5
Q303	C-4
Q304	D-5
Q451	D-1
Q701	A-7
Q702	A-7
Q703	C-2
Q704	A-6
Q706	D-1
Q707	A-7

Transistor & Resistor	
QR101	B-7
QR302	D-6
QR303	A-2
QR304	A-2
QR305	D-6
QR306	D-6
QR310	C-5
QR701	A-5

Diode	
D204	B-5
D205	D-3
D301	D-7
D302	D-5
D303	D-7
D304	D-7
D305	D-7

Connector	
FP701	C-3
PP201	D-4
PP301	B-2
PP302	B-6

Crystal Oscillator	
X201	D-2
X301	C-6
X302	A-1

Filter	
FL201	D-4
FL202	D-4

Coil	
L101	D-1
L201	A-5
L202	C-4
L204	A-5
L205	C-3
L208	C-3
L210	B-6
L211	D-4
L214	A-4
L301	D-5
L302	A-2
L303	C-4
L304	C-4
L305	C-4
L306	C-4
L307	C-5
L308	B-1
L309	A-1
L310	B-3
L311	A-3
L312	A-3
L313	D-5
L314	C-5
L315	C-5
L318	B-3
L319	A-3
L701	A-7
L702	A-6
L703	A-7
L704	A-6
L705	C-2
LB201	C-3
LB202	A-5
LB301	B-1
LB302	A-1
LB303	A-2
LB304	A-3
LB305	A-3
LB306	A-3

Capacitor	
C101	D-1
C102	B-7
C201	D-3
C202	B-4
C204	B-5
C205	B-3
C206	A-5
C207	A-5
C208	C-2
C209	C-3
C210	D-4
C211	B-5
C212	D-4
C213	A-4
C214	A-4
C216	A-4
C217	D-4
C218	D-4
C219	B-4
C220	B-3
C221	D-4
C222	A-4
C223	C-3
C225	C-3
C226	C-3
C227	D-3
C229	C-3
C230	C-3
C231	D-4
C232	C-3
C233	A-4
C235	A-5
C236	D-4
C237	D-4
C239	D-3
C250	D-3
C301	D-7
C302	D-6
C303	C-5
C304	C-5
C305	D-5
C307	D-5
C308	D-5
C309	C-5
C310	D-6
C311	C-5
C312	C-7
C313	A-1
C314	A-1
C315	C-4
C316	C-4
C317	C-4
C318	C-4
C319	C-4
C320	C-4
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C331	A-3
C332	A-3
C333	C-3
C334	C-3
C335	C-4
C336	A-1
C337	A-1
C338	A-3
C339	A-3
C452	D-1
C453	D-1
C454	D-1
C455	D-1
C701	C-1
C702	A-7
C703	B-7
C704	C-1
C705	C-2
C706	A-6
C707	D-1
C708	D-2
C709	A-6
C711	A-6
C712	B-6
C713	C-2
C714	B-5
C715	D-2
C716	A-6
C717	A-6
C718	C-1
C719	A-6
C720	A-6
C721	A-6
C722	A-5
C724	D-2
C725	A-6

Resistor	
R101	B-7
R102	B-7
R103	B-7
R201	A-4
R202	D-3
R203	B-4
R204	C-2
R206	B-4
R207	B-5
R208	D-4
R209	B-4
R210	C-2
R211	A-4
R213	D-3
R214	A-4
R216	A-5
R217	A-3
R218	A-5
R221	A-3
R222	D-4
R223	A-4
R224	D-4
R225	A-5
R226	B-4
R228	A-5
R229	A-4
R230	C-4
R231	B-4
R232	C-4
R233	C-4
R237	A-3
R238	A-3
R239	A-3
R241	A-6
R243	A-4
R244	C-4
R248	A-4
R249	A-5
R250	A-5
R301	B-3
R302	C-5
R304	C-7
R305	C-6
R306	C-6
R307	D-5
R308	D-5
R309	C-5
R310	D-5
R311	C-4
R312	B-3
R313	D-7
R314	C-7
R315	D-7
R316	D-5
R317	C-4
R318	C-4
R319	D-4
R320	C-7
R321	C-5
R322	C-5
R323	D-6
R324	D-5
R325	C-7
R326	C-7
R327	C-5
R328	C-5
R329	C-5
R330	C-5
R331	C-7
R332	D-6
R333	D-6
R334	A-2
R335	D-7
R336	D-6
R337	D-6
R338	C-7
R339	D-6
R340	A-3
R341	C-5
R342	C-7
R343	C-5
R344	C-5
R345	C-6
R346	C-5
R348	D-6
R351	B-2
R352	C-7
R353	C-7
R354	D-6
R355	D-6
R356	D-6
R357	D-6
R358	D-5
R359	C-4
R366	C-5
R372	A-2
R375	B-3
R376	B-3
R377	B-6
R378	D-5
R379	D-5
R380	D-5
R381	C-5
R382	C-5
R383	A-2
R385	A-1
R386	A-1
R387	C-7
R393	D-6
R451	D-1
R452	D-1
R453	D-1
R454	D-1
R701	C-1
R702	A-7
R703	A-5
R704	C-2
R705	B-6
R706	A-6
R707	A-6
R708	A-6
R709	A-6
R710	A-6
R711	C-2
R712	B-6
R713	B-6
R714	D-2
R715	D-2
R716	B-6
R717	B-6
R718	A-6
R719	D-2
R720	D-1
R721	A-6
R722	A-6
R723	A-6
R724	A-6
R725	A-6
R726	C-2
R727	C-2
R728	C-2
R729	C-2
R730	C-2
R731	C-1
R732	C-2
R733	C-1
R734	C-1
R735	C-1
R736	C-1
R737	C-1
R738	C-2
R740	C-1
R741	C-1
R742	A-6
R743	A-6
R744	B-6
R745	D-2
R746	D-2
R747	A-6
R748	C-2
R749	D-1
R750	A-6
R751	D-1
R752	D-1
R753	D-1
R754	B-6
R757	A-6
R758	C-2
R761	A-6
R762	A-6

Resistor Array	
RA302	D-5
RA303	C-7
RA304	C-5
RA305	D-6
RA306	C-5
RA307	C-4

Wire	
W201	A-5
W207	A-5
W208	A-5
W303	A-2
W305	C-4
W306	B-2
W307	A-3
W309	C-4

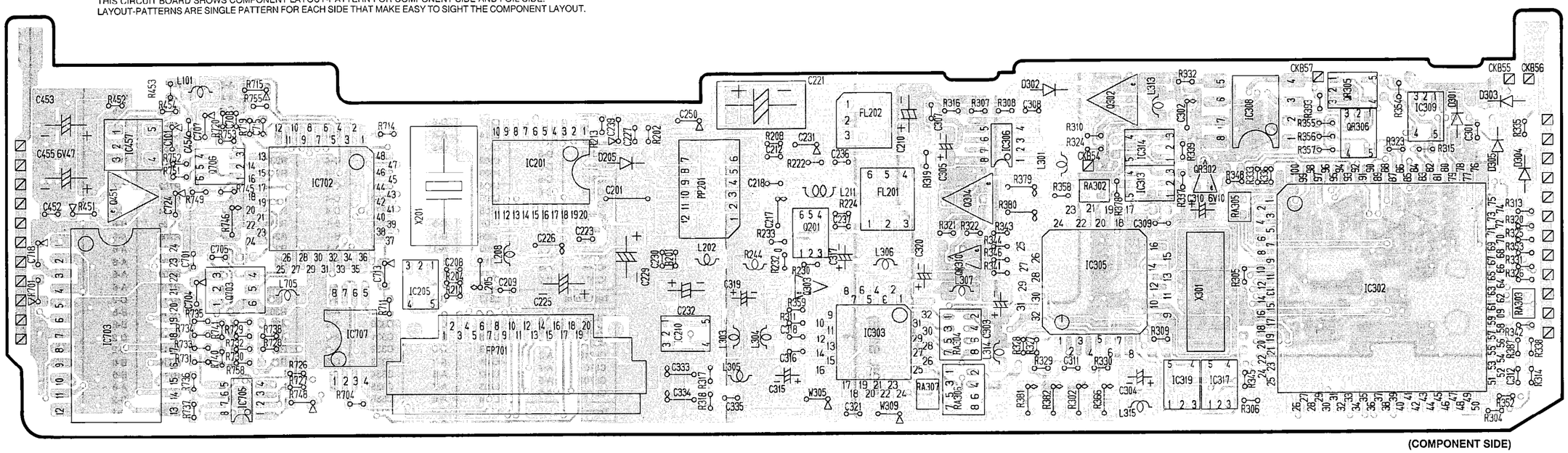
ADDRESS INFORMATION

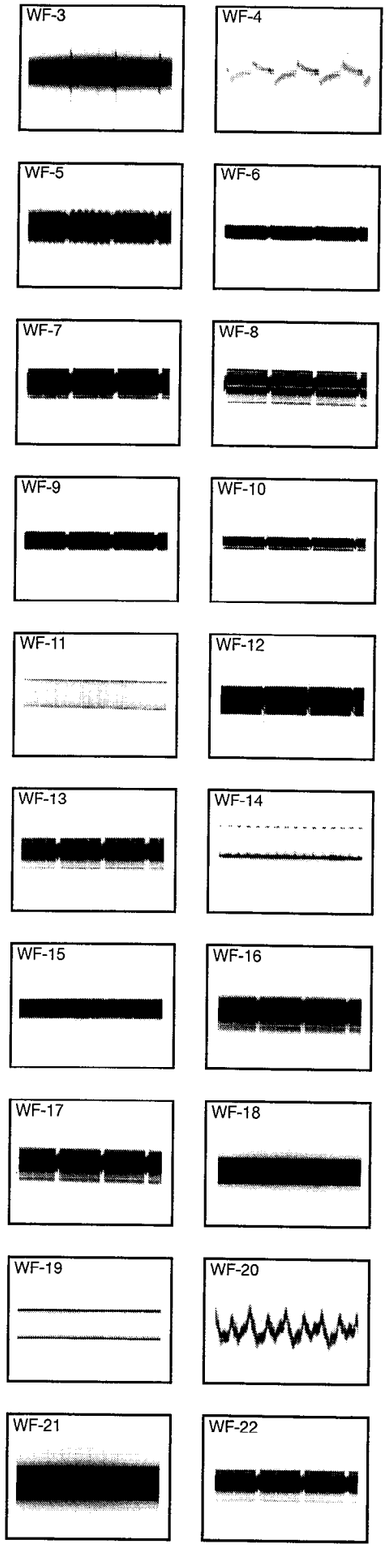
3-33. CAMERA [Camera Connection, Sensor, Lens Drive Section] C.B.A. (VEP23450A)

WF-1

WF-2

NOTE : MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A.
THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE.
LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.





Checking Point of the CSP IC3801

CSP IC3801 PIN	CSP IC3801 NAME	CHECK POINT		WF No.	REMARKS
1	GND	GND	—	—	
2	ADB5	RA3807-2	B-11	—	GND
3	ADB4	RA3807-4	B-11	—	GND
4	ADB3	RA3807-6	B-11	—	GND
5	ADB2	RA3807-8	B-11	—	GND
6	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
7	ADB1	RA3808-2	B-11	—	GND
8	ADB0	RA3808-4	B-11	—	GND
9	ADEN	R3841 - (UPPER)	B-6	—	
10	BKRDY	—	—	—	
11	GND	GND	—	—	
12	UPPEN	—	—	—	
13	CYCLD	—	—	—	
14	CYCLS	GND	—	—	
15	CLK26	—	—	—	
16	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
17	/RST	R3803 - (UPPER)	B-6	WF-1	VTR MAIN C.B.A. (F)
18	FRP	IC3001-58	D-3	WF-2	VTR MAIN C.B.A. (C)
19	VFRP	R3845 - (UPPER)	B-6	WF-1	VTR MAIN C.B.A. (F)
20	TEST0	GND	—	—	
21	GND	GND	—	—	
22	TEST1	GND	—	—	
23	SI/TEST2	GND	—	—	
24	SO	—	—	—	
25	SCK	—	—	—	
26	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
27	/SEN	—	—	—	
28	TMS	IC3001-147	B-2	WF-3	VTR MAIN C.B.A. (C)
29	TCK	IC3001-148	B-2	WF-3	
30	/TRST	R3803 - (UPPER)	B-2	WF-1	VTR MAIN C.B.A. (F)
31	GND	GND	—	—	
32	TDI	PP3001-51	A-5	WF-4	VTR MAIN C.B.A. (F)
33	TDO	IC3201-144	B-5	WF-5	VTR MAIN C.B.A. (C)
34	/LISO	R3801 - (UPPER)	B-6	WF-6	VTR MAIN C.B.A. (F)
35	LLREC	—	—	—	
36	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
37	LD3	RA3809-3	B-12	—	GND
38	LD2	RA3809-1	B-12	—	GND
39	LD1	—	—	—	
40	LD0	—	—	—	
41	LCTLI	—	—	—	
42	LCTLO	—	—	—	
43	LSYSCLK	—	—	—	
44	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
45	GND	GND	—	—	
46	D GND	GND	—	—	
47	D VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
48	PC0	RA3803-3	B-12	—	GND
49	PC1	RA3803-1	B-12	—	GND
50	PC2	R3804 - (LOWER)	B-6	WF-7	VTR MAIN C.B.A. (F)
51	LREQ	—	—	—	
52	CTLO	—	—	—	
53	CTLI	—	—	—	
54	D0	—	—	—	
55	D1	—	—	—	
56	SYSCLK	—	—	—	
57	D VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
58	D GND	GND	—	—	
59	A GND	GND	—	—	
60	A GND	GND	—	—	
61	TP BIAS	C3807 - (LEFT)	C-6	WF-8	VTR MAIN C.B.A. (F)
62	A GND	GND	—	—	
63	A GND	GND	—	—	
64	A VCC	C3809 - (LEFT)	C-6	WF-8	VTR MAIN C.B.A. (F)
65	A VCC	C3826(+) - (UPPER)	B-6	—	DIF 3V
66	CPS	R3806 - (LEFT)	C-6	WF-9	VTR MAIN C.B.A. (F)
67	RI	R3815 - (LEFT)	C-6	WF-10	
68	RO	R3807 - (LEFT)	C-6	WF-8	
69	TPB–	R3814 - (LEFT)	C-7	WF-8	
70	TPB+	R3813 - (LEFT)	C-7	WF-8	
71	TPA–	R3812 - (LEFT)	C-6	WF-8	
72	TPA+	R3811 - (LEFT)	C-6	WF-8	
73	XO	—	—	—	
74	XI	C3827 - (LOWER)	C-5	WF-11	VTR MAIN C.B.A. (F)
75	PLL GND	GND	—	—	
76	PLL GND	GND	—	—	
77	PLL VDD	C3825(+) - (UPPER)	C-7	—	DIF 3V
78	PLL FLT	C3813 - (LOWER)	C-6	WF-10	VTR MAIN C.B.A. (F)
79	PWRDN	—	—	—	
80	AVCC	C3826(+) - (UPPER)	B-6	—	DIF 3V
81	/ISO	R3809 - (LOWER)	C-6	—	
82	/RESET	IC3201-84	C-5	WF-12	VTR MAIN C.B.A. (C)
83	TESTM2	RA3805-3	C-6	—	
84	TESTM1	RA3805-1	C-6	—	
85	CNA	—	—	—	
86	LPS	RA3804-3	C-6	—	
87	C/LKON	RA3804-1	C-6	—	
88	DVSS	GND	—	—	
89	GND	GND	—	—	
90	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
91	LPWRDN	—	—	—	
92	LCNA	—	—	—	
93	RAMEZ	GND	—	—	
94	NTCLK	GND	—	—	
95	GND	GND	—	—	
96	NTOUT	—	—	—	
97	NTZIHZ	GND	—	—	
98	CYCLEIN	GND	—	—	
99	/INTP	IC2001-88	A-3	WF-13	VTR MAIN C.B.A. (C)
100	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
101	VCCA (2/3)	C3824(+) - (RIGHT)	C-5	—	REG D2V
102	AD15	IC2001-154	B-4	WF-14	VTR MAIN C.B.A. (C)
103	AD14	IC2001-153	B-4	WF-14	
104	AD13	IC2001-152	B-4	WF-14	
105	AD12	IC2001-151	B-4	WF-14	
106	GND	GND	—	—	
107	AD11	IC2001-150	B-4	WF-14	VTR MAIN C.B.A. (C)
108	AD10	IC2001-149	B-4	WF-14	
109	AD9	IC2001-148	B-4	WF-14	
110	AD8	IC2001-147	B-4	WF-14	
111	VCCA (2/3)	C3824(+) - (RIGHT)	C-5	—	REG D 2V
112	AD7	IC2001-146	B-4	WF-14	VTR MAIN C.B.A. (C)
113	AD6	IC2001-145	B-4	WF-14	
114	AD5	IC2001-144	B-4	WF-14	
115	AD4	IC2001-143	B-4	WF-14	
116	GND	GND	—	—	
117	AD3	IC2001-142	B-4	WF-14	VTR MAIN C.B.A. (C)
118	AD2	IC2001-141	B-4	WF-14	
119	AD1	IC2001-140	B-4	WF-14	
120	AD0	IC2001-139	B-4	WF-14	
121	GND	GND	—	—	
122	/LCNTD	R3842 - (LOWER)	C-5	WF-15	VTR MAIN C.B.A. (F)
123	/RD	—	—	—	
124	ALE	IC2001-135	A-4	WF-16	VTR MAIN C.B.A. (C)
125	/DC	IC2001-133	A-4	WF-17	
126	BCLK	IC2001-132	A-4	WF-18	
127	VCCB (2/3)	C3824(+) - (RIGHT)	C-5	—	REG D 2V
128	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
129	VCCB (2/3)	C3824(+) - (RIGHT)	C-5	—	REG D 2V
130	AD15/DBA0	IC3201-151	B-5	WF-19	VTR MAIN C.B.A. (C)
131	AD14/DBA1	IC3201-152	B-5	WF-19	
132	AD13/DBA2	IC3201-153	B-5	WF-19	
133	AD12/DBA3	IC3201-154	B-5	WF-19	
134	ADB11/SMPA	IC3201-155	B-5	WF-19	
135	GND	GND	—	—	
136	ADB10/DBB0	RA3806-2	B-11	—	GND
137	ADB9/DBB1	RA3806-4	B-11	—	GND
138	ADB8/DBB2	RA3806-6	B-11	—	GND
139	ADB7/DBB3	RA3806-8	B-11	—	GND
140	ADB6/SMPB	R3834 - (RIGHT)	B-5	WF-20	VTR MAIN C.B.A. (F)
141	VCCB (2/3)	C3824(+) - (RIGHT)	C-5	—	REG D 2V
142	CLK18	IC3201-3	B-6	WF-21	VTR MAIN C.B.A. (C)
143	VCC	C3825(+) - (UPPER)	C-7	—	DIF 3V
144	SSP	IC3201-148	B-5	WF-22	VTR MAIN C.B.A. (C)

VTR MAIN C.B.A. (F): FOIL SIDE / (C):COMPONENT SIDE

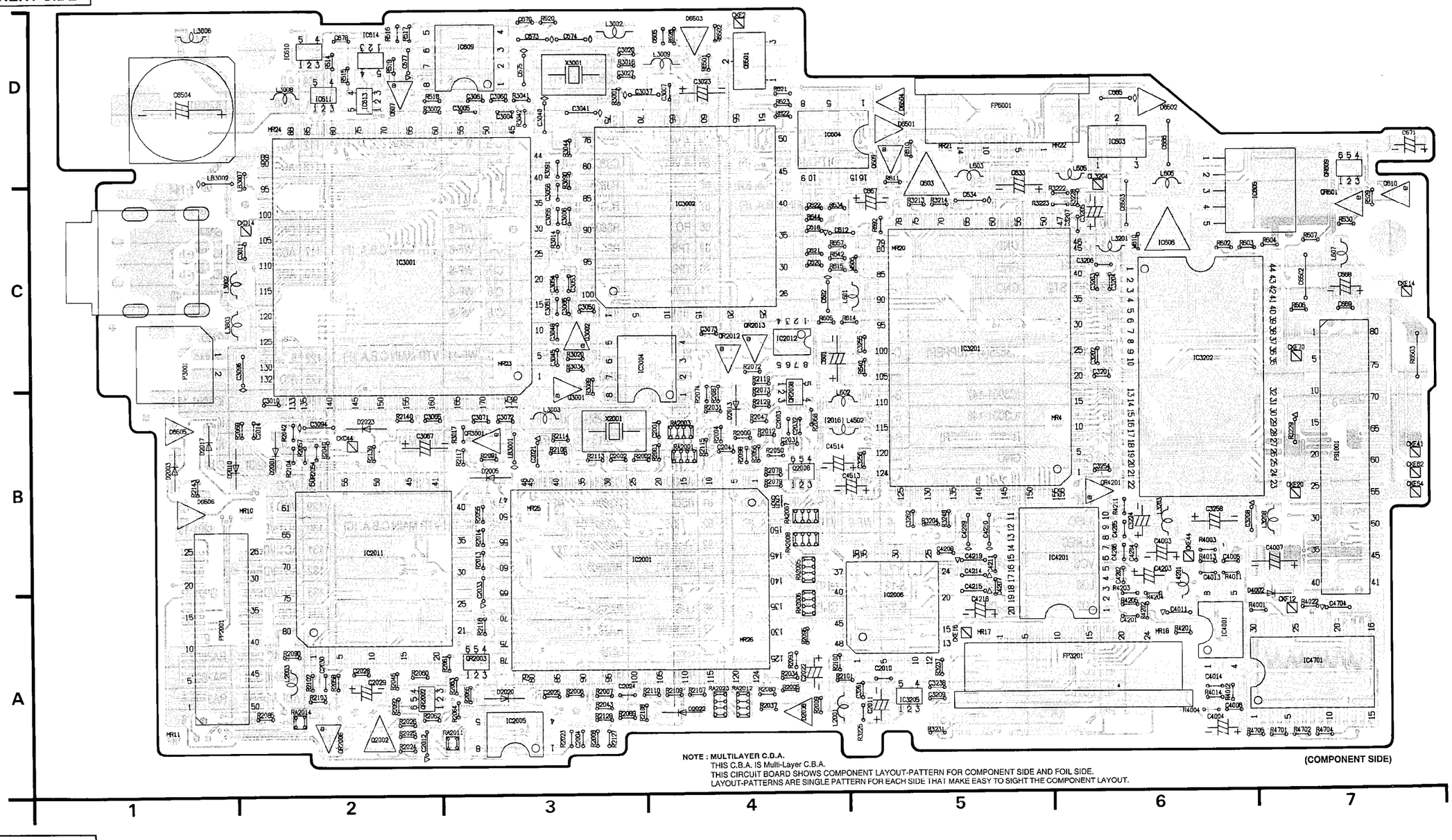
3-34. VTR MAIN [VTR Main Connection, System Control & Servo, Video 1, Video 2, LCD, Digital I/F, Audio, Sound Title Section] C.B.A. (VEP03E26A)

MAIN C.B.A. (1)

Integrated Circuit		IC614	D-2 ©	IC2012	C-4 ©	IC3202	C-6 ©	IC6505	D-6 Ⓕ	Q609	D-5 ©	Q3203	A-3 Ⓕ	QR607	C-1 Ⓕ	QR2011	B-7 Ⓕ	CL3002	C-5 Ⓕ	D2006	A-4 ©	D2021	A-5 Ⓕ	D6504	D-5 ©	PP3002	B-2 Ⓕ	Coil		L3003	B-3 ©
IC601	D-2 Ⓕ	IC2001	B-4 ©	IC2013	B-6 Ⓕ	IC3203	A-3 Ⓕ	IC6506	D-6 Ⓕ	Q610	C-7 ©	Q3204	A-4 Ⓕ	QR609	D-7 ©	QR2012	C-4 ©	CL3004	C-4 Ⓕ	D2007	A-4 Ⓕ	D2022	A-4 ©	D6505	B-1 ©	PS1001	B-7 ©	L601	C-5 ©	L3004	C-5 Ⓕ
IC602	D-3 Ⓕ	IC2002	B-5 Ⓕ	IC2014	A-5 Ⓕ	IC3204	C-3 Ⓕ	Transistor		Q611	C-1 Ⓕ	Q4001	A-2 Ⓕ	QR2001	B-7 Ⓕ	QR2013	C-4 ©	CL3202	B-3 Ⓕ	D2008	A-4 Ⓕ	D2023	B-2 ©	D6506	B-1 ©	PS3001	C-2 Ⓕ	L602	C-5 ©	L3005	D-4 Ⓕ
IC603	D-6 ©	IC2003	B-4 Ⓕ	IC2015	D-7 Ⓕ	IC3205	A-5 ©			Q2001	B-5 Ⓕ	Q4701	A-1 Ⓕ	QR2002	A-2 ©	QR3001	B-3 ©	CL3203	C-4 Ⓕ	D2010	B-2 ©	D2024	B-5 Ⓕ	Connector		PS3002	C-6 Ⓕ	L603	D-5 ©	L3006	D-1 ©
IC604	D-4 ©	IC2004	B-4 Ⓕ	IC3001	C-2 ©	IC3801	C-6 Ⓕ	Q601	C-2 Ⓕ	Q2002	A-2 ©	Q4702	A-1 Ⓕ	QR2003	A-3 ©	QR4001	B-2 Ⓕ	CL3204	D-6 ©	D2011	A-5 Ⓕ	D2025	B-6 Ⓕ	FP3201	A-6 ©	Crystal Oscillator		L605	D-6 ©	L3008	D-2 ©
IC605	D-7 ©	IC2005	A-3 ©	IC3002	C-4 ©	IC4001	A-6 ©	Q602	C-2 Ⓕ	Q2003	A-4 Ⓕ	Q6501	D-4 ©	QR2004	A-4 Ⓕ	QR4002	B-2 Ⓕ	Diode		D2012	B-5 Ⓕ	D3201	A-3 Ⓕ	FP4001	B-1 Ⓕ	X2001	B-3 ©	L606	D-6 ©	L3009	D-4 ©
IC606	C-6 ©	IC2006	A-5 ©	IC3003	C-4 Ⓕ	IC4201	B-6 ©	Q603	D-5 ©	Q2006	A-4 Ⓕ	Transistor & Resistor		QR2005	A-4 Ⓕ	QR4003	B-2 Ⓕ	D2001	B-2 ©	D2013	B-4 ©	D3202	A-4 Ⓕ	FP6001	D-5 ©	X2002	C-5 Ⓕ	L607	C-7 ©	L3010	B-2 Ⓕ
IC609	D-3 ©	IC2007	A-5 Ⓕ	IC3004	C-4 ©	IC4501	B-3 Ⓕ	Q604	C-2 Ⓕ	Q2008	A-2 ©	QR601	C-7 ©	QR2006	A-2 ©	QR4201	B-6 ©	D2002	B-5 Ⓕ	D2015	A-3 Ⓕ	D4001	B-1 Ⓕ	FP6002	A-7 Ⓕ	X2003	A-6 Ⓕ	L2001	A-5 ©	L3011	B-2 Ⓕ
IC610	D-2 ©	IC2008	B-5 Ⓕ	IC3005	D-5 Ⓕ	IC4701	A-7 ©	Q605	C-1 Ⓕ	Q3001	B-4 ©	QR604	A-1 Ⓕ	QR2007	A-5 Ⓕ	QR4703	A-2 Ⓕ	D2003	B-1 ©	D2016	A-4 Ⓕ	D4002	B-7 ©	P3001	C-1 ©	X3001	D-3 ©	L2002	B-5 Ⓕ	L3201	C-6 ©
IC611	D-2 ©	IC2009	B-7 Ⓕ	IC3006	C-2 Ⓕ	IC6501	A-6 Ⓕ	Q606	B-1 Ⓕ	Q3002	C-3 ©	QR605	A-1 Ⓕ	QR2008	C-4 ©	Test Point		D2004	A-5 Ⓕ	D2017	B-1 ©	D6501	D-5 ©	PP2001	A-1 ©	X3003	C-4 Ⓕ	L2003	A-2 ©	L3203	A-3 Ⓕ
IC613	D-2 ©	IC2010	A-6 Ⓕ	IC3007	D-6 Ⓕ	IC6502	B-6 Ⓕ	Q607	D-2 ©	Q3201	A-3 Ⓕ	QR606	C-1 Ⓕ	QR2009	B-5 Ⓕ	CL3001	D-6 Ⓕ	D2005	B-3 ©	D2018	A-4 Ⓕ	D6502	D-6 ©	PP3001	A-5 Ⓕ			L3002	D-3 ©	L3204	B-3 Ⓕ
		IC2011	B-2 ©	IC3201	C-5 ©	IC6503	A-6 Ⓕ	Q608	B-1 Ⓕ	Q3202	B-2 Ⓕ	QR606	C-1 Ⓕ	QR2010	B-5 Ⓕ					D2020	A-3 ©	D6503	D-4 ©								

ADDRESS INFORMATION ©... COMPONENT SIDE Ⓕ... FOIL SIDE

COMPONENT SIDE



NOTE : MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A.
THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE.
LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

(COMPONENT SIDE)

Back Page:
CAMERA C.B.A. Section

MAIN C.B.A. (2)

L3205	C-2 Ⓕ	L4502	B-5 Ⓒ	**Capacitor**		C611	D-3 Ⓕ	C623	D-4 Ⓕ	C638	D-3 Ⓕ	C650	D-2 Ⓕ	C665	D-6 Ⓒ	C678	D-2 Ⓒ	C2011	A-5 Ⓒ	C2023	B-4 Ⓕ	C2035	A-6 Ⓕ	C3006	C-3 Ⓒ	C3022	D-5 Ⓕ	C3040	D-3 Ⓒ	C3054	C-3 Ⓒ
L3206	B-3 Ⓕ	L6501	B-6 Ⓕ	C601	C-4 Ⓒ	C612	C-5 Ⓒ	C624	D-4 Ⓕ	C639	D-2 Ⓕ	C651	D-2 Ⓕ	C666	D-6 Ⓒ	C679	D-5 Ⓕ	C2012	A-2 Ⓒ	C2024	A-3 Ⓒ	C2036	A-6 Ⓕ	C3007	D-4 Ⓒ	C3023	D-4 Ⓒ	C3041	D-3 Ⓒ	C3055	C-3 Ⓒ
L3207	B-2 Ⓕ	L6502	C-1 Ⓕ	C602	C-4 Ⓒ	C613	D-3 Ⓕ	C625	D-4 Ⓕ	C640	D-3 Ⓕ	C652	C-3 Ⓕ	C667	C-5 Ⓒ	C2001	B-4 Ⓒ	C2013	B-6 Ⓕ	C2025	A-3 Ⓒ	C2037	B-5 Ⓕ	C3008	C-4 Ⓕ	C3024	D-6 Ⓕ	C3042	D-5 Ⓕ	C3056	D-5 Ⓕ
L3208	B-7 Ⓒ	LB3001	B-3 Ⓒ	C603	D-4 Ⓕ	C614	D-3 Ⓕ	C626	C-4 Ⓕ	C641	C-3 Ⓕ	C653	C-3 Ⓕ	C668	C-7 Ⓒ	C2002	B-3 Ⓒ	C2014	B-2 Ⓒ	C2026	A-6 Ⓕ	C2038	B-5 Ⓕ	C3009	C-4 Ⓕ	C3026	C-2 Ⓕ	C3043	C-5 Ⓕ	C3057	D-5 Ⓕ
L3209	A-4 Ⓕ	LB3002	D-1 Ⓒ	C604	D-4 Ⓕ	C615	C-3 Ⓕ	C630	C-3 Ⓕ	C642	D-3 Ⓕ	C654	C-3 Ⓕ	C669	C-7 Ⓒ	C2003	B-4 Ⓒ	C2015	B-6 Ⓕ	C2027	B-6 Ⓕ	C2040	B-5 Ⓕ	C3010	B-2 Ⓒ	C3027	D-3 Ⓒ	C3044	C-5 Ⓕ	C3058	D-3 Ⓒ
L3801	C-5 Ⓕ	LB3003	B-4 Ⓕ	C605	D-4 Ⓒ	C616	C-3 Ⓕ	C631	D-4 Ⓕ	C643	D-4 Ⓕ	C655	C-3 Ⓕ	C671	D-7 Ⓒ	C2004	A-3 Ⓒ	C2016	A-4 Ⓕ	C2028	A-2 Ⓒ	C2041	B-4 Ⓒ	C3011	C-2 Ⓒ	C3028	D-5 Ⓕ	C3045	C-3 Ⓒ	C3060	D-3 Ⓒ
L3802	C-2 Ⓒ	LB3005	D-5 Ⓕ	C606	D-4 Ⓕ	C617	D-3 Ⓕ	C632	D-4 Ⓕ	C644	D-2 Ⓕ	C656	D-3 Ⓕ	C672	C-1 Ⓕ	C2005	A-5 Ⓕ	C2017	A-4 Ⓕ	C2029	A-2 Ⓒ	C2042	B-4 Ⓕ	C3012	B-2 Ⓕ	C3030	D-5 Ⓕ	C3046	C-5 Ⓕ	C3061	D-3 Ⓒ
L3803	C-2 Ⓒ	LB3006	D-5 Ⓕ	C607	D-4 Ⓕ	C618	C-4 Ⓒ	C633	D-5 Ⓒ	C645	D-2 Ⓕ	C657	C-3 Ⓕ	C673	D-3 Ⓒ	C2006	B-5 Ⓕ	C2018	A-5 Ⓕ	C2030	A-2 Ⓒ	C2199	B-4 Ⓕ	C3013	C-2 Ⓕ	C3035	D-5 Ⓕ	C3047	C-5 Ⓕ	C3065	B-3 Ⓒ
L3901	A-2 Ⓕ	LB3007	D-2 Ⓒ	C608	D-3 Ⓕ	C619	D-3 Ⓕ	C634	C-5 Ⓒ	C646	C-2 Ⓕ	C658	C-3 Ⓕ	C674	D-3 Ⓒ	C2007	A-5 Ⓕ	C2019	B-5 Ⓕ	C2031	B-4 Ⓒ	C3002	B-3 Ⓕ	C3015	D-5 Ⓕ	C3036	D-4 Ⓕ	C3048	C-3 Ⓒ	C3066	C-3 Ⓒ
L4001	A-1 Ⓕ			C609	D-4 Ⓕ	C620	C-4 Ⓒ	C635	D-3 Ⓕ	C647	C-2 Ⓕ	C662	C-4 Ⓕ	C675	D-3 Ⓒ	C2008	B-7 Ⓕ	C2020	B-5 Ⓕ	C2032	B-4 Ⓒ	C3003	D-4 Ⓕ	C3018	D-5 Ⓕ	C3037	D-4 Ⓒ	C3050	C-3 Ⓒ	C3067	B-2 Ⓒ
L4201	B-6 Ⓒ			C610	D-3 Ⓕ	C621	C-4 Ⓒ	C636	D-2 Ⓕ	C648	C-2 Ⓕ	C663	C-4 Ⓕ	C676	D-3 Ⓒ	C2009	B-7 Ⓕ	C2021	B-3 Ⓒ	C2033	B-3 Ⓒ	C3004	D-3 Ⓒ	C3020	D-3 Ⓒ	C3038	D-4 Ⓕ	C3051	C-3 Ⓒ	C3071	B-3 Ⓒ
L4202	B-2 Ⓕ					C622	C-4 Ⓒ	C637	D-2 Ⓕ	C649	D-4 Ⓕ	C664	B-3 Ⓕ	C677	D-2 Ⓒ	C2010	A-5 Ⓒ	C2022	A-4 Ⓒ	C2034	B-5 Ⓕ	C3005	D-3 Ⓒ	C3021	D-5 Ⓕ	C3039	D-4 Ⓕ	C3053	C-3 Ⓒ	C3072	B-3 Ⓒ

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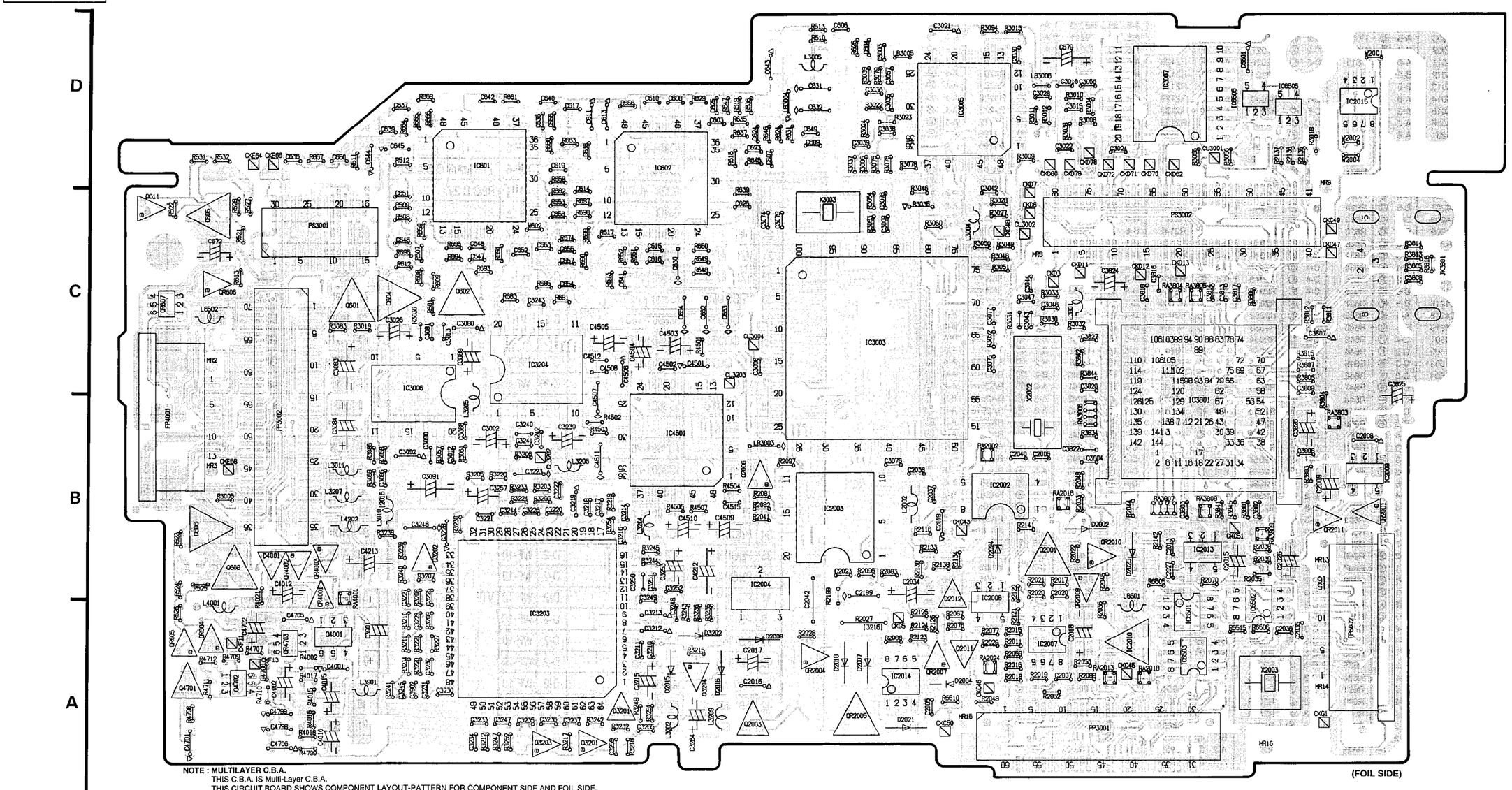
Ⓕ... FOIL SIDE

FOIL SIDE



NOTE : MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A.
THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE.
LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

MAIN C.B.A. (3)

C3073	C-4 ©	C3807	C-7 Ⓕ	R519	D-2 ©	R2004	B-4 ©	R2099	B-4 ©	R3059	B-2 Ⓕ	R4014	A-6 ©
C3074	C-4 Ⓕ	C3808	C-7 Ⓕ	R520	D-3 ©	R2005	A-4 ©	R2100	A-5 ©	R3060	C-5 Ⓕ	R4015	A-2 Ⓕ
C3075	C-5 Ⓕ	C3809	C-6 Ⓕ	R521	C-1 Ⓕ	R2006	A-3 ©	R2101	A-5 ©	R3061	B-2 Ⓕ	R4016	A-2 Ⓕ
C3076	B-4 Ⓕ	C3813	C-6 Ⓕ	R522	C-1 Ⓕ	R2007	A-3 ©	R2102	A-2 ©	R3075	D-4 Ⓕ	R4017	A-2 Ⓕ
C3077	C-5 Ⓕ	C3814	C-6 Ⓕ	R523	B-1 Ⓕ	R2008	A-3 ©	R2103	A-2 ©	R3076	D-4 Ⓕ	R4018	A-2 Ⓕ
C3078	C-4 Ⓕ	C3816	C-6 Ⓕ	R524	B-1 Ⓕ	R2009	A-4 ©	R2104	B-2 ©	R3078	D-5 Ⓕ	R4021	B-1 Ⓕ
C3079	C-4 Ⓕ	C3817	C-6 Ⓕ	R525	B-1 Ⓕ	R2011	A-5 Ⓕ	R2106	B-3 ©	R3079	D-4 Ⓕ	R4022	A-7 ©
C3080	C-2 Ⓕ	C3818	C-6 Ⓕ	R526	A-1 Ⓕ	R2012	B-4 ©	R2107	A-4 ©	R3083	C-2 Ⓕ	R4201	A-6 ©
C3081	C-2 Ⓕ	C3820	C-5 Ⓕ	R527	C-1 Ⓕ	R2013	B-3 ©	R2108	A-4 ©	R3085	B-2 Ⓕ	R4202	A-6 ©
C3083	C-2 Ⓕ	C3822	B-5 Ⓕ	R528	C-1 Ⓕ	R2014	B-3 ©	R2109	A-4 ©	R3089	C-3 ©	R4203	B-6 ©
C3084	B-2 Ⓕ	C3824	C-6 Ⓕ	R529	C-7 ©	R2015	A-5 Ⓕ	R2110	A-4 ©	R3090	D-3 ©	R4204	B-6 ©
C3086	B-2 Ⓕ	C3825	C-7 Ⓕ	R530	C-7 ©	R2016	A-5 Ⓕ	R2113	B-3 ©	R3091	D-3 ©	R4205	B-6 ©
C3088	B-2 Ⓕ	C3826	B-6 Ⓕ	R531	D-1 Ⓕ	R2017	B-5 Ⓕ	R2114	B-3 ©	R3094	D-5 Ⓕ	R4211	B-6 ©
C3089	C-2 Ⓕ	C3827	C-5 Ⓕ	R532	D-1 Ⓕ	R2018	A-5 Ⓕ	R2115	B-4 ©	R3203	B-3 Ⓕ	R4501	C-4 Ⓕ
C3090	B-2 Ⓕ	C3901	A-2 Ⓕ	R601	C-2 Ⓕ	R2019	A-5 Ⓕ	R2116	B-5 Ⓕ	R3204	B-5 ©	R4502	B-3 Ⓕ
C3091	B-2 Ⓕ	C3902	A-2 Ⓕ	R602	C-6 ©	R2020	B-5 Ⓕ	R2117	B-3 ©	R3205	B-2 Ⓕ	R4503	B-3 Ⓕ
C3092	B-2 Ⓕ	C4001	A-2 Ⓕ	R603	C-7 ©	R2021	B-5 Ⓕ	R2118	A-3 ©	R3206	B-3 Ⓕ	R4504	B-4 Ⓕ
C3094	B-2 ©	C4002	A-2 Ⓕ	R604	C-7 ©	R2022	B-5 Ⓕ	R2119	C-4 ©	R3207	B-2 Ⓕ	R4506	B-3 Ⓕ
C3096	C-2 ©	C4003	B-6 ©	R605	C-4 ©	R2023	A-3 ©	R2121	A-5 Ⓕ	R3208	B-2 Ⓕ	R4507	B-4 Ⓕ
C3201	C-6 ©	C4004	A-6 ©	R606	C-7 ©	R2024	A-2 ©	R2122	B-5 Ⓕ	R3209	A-2 Ⓕ	R4701	A-7 ©
C3202	C-6 ©	C4005	B-6 ©	R607	C-7 ©	R2025	A-2 ©	R2123	A-5 Ⓕ	R3210	A-2 Ⓕ	R4702	A-7 ©
C3203	C-6 ©	C4006	A-6 ©	R608	C-2 Ⓕ	R2026	A-2 ©	R2124	A-5 Ⓕ	R3211	A-2 Ⓕ	R4704	A-7 ©
C3204	C-6 ©	C4007	B-7 ©	R609	C-2 Ⓕ	R2027	A-4 Ⓕ	R2125	A-5 Ⓕ	R3212	A-2 Ⓕ	R4705	A-7 ©
C3205	C-6 ©	C4011	A-6 ©	R610	D-5 ©	R2028	A-4 Ⓕ	R2126	A-5 Ⓕ	R3213	C-5 ©	R4707	A-1 Ⓕ
C3206	C-6 ©	C4012	B-2 Ⓕ	R611	D-5 ©	R2029	A-5 Ⓕ	R2127	A-3 ©	R3214	C-5 ©	R4708	A-1 Ⓕ
C3207	C-6 ©	C4013	B-6 ©	R612	C-2 Ⓕ	R2031	B-4 ©	R2128	A-3 ©	R3215	A-4 Ⓕ	R4709	A-1 Ⓕ
C3208	B-7 ©	C4014	A-6 ©	R613	C-1 Ⓕ	R2033	B-5 Ⓕ	R2129	B-4 ©	R3217	A-3 Ⓕ	R4710	A-1 Ⓕ
C3209	A-5 ©	C4015	A-2 Ⓕ	R614	C-5 ©	R2034	A-4 ©	R2130	B-5 Ⓕ	R3218	A-3 Ⓕ	R4711	A-1 Ⓕ
C3210	A-3 Ⓕ	C4016	A-2 Ⓕ	R615	C-4 ©	R2035	B-6 Ⓕ	R2133	B-5 Ⓕ	R3219	B-3 Ⓕ	R4712	A-1 Ⓕ
C3211	A-3 Ⓕ	C4201	A-6 ©	R616	D-4 Ⓕ	R2036	A-5 Ⓕ	R2134	B-5 Ⓕ	R3220	A-2 Ⓕ	R4798	A-1 Ⓕ
C3212	A-3 Ⓕ	C4202	B-6 ©	R617	C-3 Ⓕ	R2037	A-4 ©	R2135	D-6 Ⓕ	R3221	A-2 Ⓕ	R4799	A-2 Ⓕ
C3213	A-3 Ⓕ	C4203	B-6 ©	R619	D-4 Ⓕ	R2038	B-6 Ⓕ	R2136	D-6 Ⓕ	R3222	D-6 ©	R6501	D-4 ©
C3214	B-3 Ⓕ	C4204	B-6 ©	R621	D-4 ©	R2039	B-6 Ⓕ	R2137	D-6 Ⓕ	R3223	C-6 ©	R6502	D-4 ©
C3215	A-3 Ⓕ	C4205	B-6 ©	R622	D-4 ©	R2040	B-2 ©	R2138	B-5 Ⓕ	R3224	B-3 Ⓕ	R6503	C-7 ©
C3216	B-3 Ⓕ	C4206	B-6 ©	R623	D-4 ©	R2041	B-4 Ⓕ	R2139	B-2 ©	R3225	A-5 ©	R6505	B-6 Ⓕ
C3217	B-3 Ⓕ	C4207	B-5 ©	R624	D-4 Ⓕ	R2042	B-2 ©	R2140	B-2 ©	R3226	B-3 Ⓕ	R6506	A-6 Ⓕ
C3218	B-3 Ⓕ	C4208	B-5 ©	R625	D-4 Ⓕ	R2043	A-3 ©	R2141	B-5 Ⓕ	R3227	A-2 Ⓕ	R6510	A-5 Ⓕ
C3219	B-3 Ⓕ	C4209	B-5 ©	R626	D-4 ©	R2044	B-6 Ⓕ	R2142	B-6 Ⓕ	R3228	C-6 ©	R6515	A-6 Ⓕ
C3220	B-3 Ⓕ	C4210	B-5 ©	R629	D-4 Ⓕ	R2045	B-6 Ⓕ	R2143	B-1 ©	R3229	B-7 ©	**Resistor Array**	
C3221	B-2 Ⓕ	C4211	B-5 ©	R631	D-4 Ⓕ	R2046	A-2 ©	R2199	B-4 Ⓕ	R3230	B-2 Ⓕ		
C3222	B-3 Ⓕ	C4212	B-4 Ⓕ	R634	C-4 ©	R2047	B-4 ©	R3001	D-3 ©	R3231	A-5 ©	RA2001	B-4 ©
C3223	B-3 Ⓕ	C4213	B-2 Ⓕ	R635	D-4 Ⓕ	R2048	B-5 Ⓕ	R3002	D-3 ©	R3232	A-3 Ⓕ	RA2002	B-5 Ⓕ
C3224	B-6 ©	C4214	B-5 ©	R636	D-4 Ⓕ	R2049	A-5 Ⓕ	R3004	D-5 Ⓕ	R3233	B-3 Ⓕ	RA2003	B-4 ©
C3225	B-2 Ⓕ	C4215	B-5 ©	R637	D-4 Ⓕ	R2050	B-4 ©	R3005	B-1 Ⓕ	R3234	A-2 Ⓕ	RA2005	B-4 ©
C3226	B-3 Ⓕ	C4218	A-5 ©	R639	D-4 Ⓕ	R2052	A-5 Ⓕ	R3006	D-4 Ⓕ	R3235	A-4 Ⓕ	RA2006	A-4 ©
C3227	B-2 Ⓕ	C4219	B-5 ©	R640	C-5 ©	R2053	A-5 Ⓕ	R3008	D-5 Ⓕ	R3236	A-4 Ⓕ	RA2007	B-4 ©
C3228	B-2 Ⓕ	C4501	C-4 Ⓕ	R642	C-4 ©	R2054	B-2 ©	E3009	D-5 Ⓕ	R3237	A-5 ©	RA2008	B-4 ©
C3229	A-2 Ⓕ	C4502	C-3 Ⓕ	R644	C-4 ©	R2055	B-3 ©	R3010	D-5 Ⓕ	R3238	B-2 Ⓕ	RA2011	A-3 ©
C3230	A-2 Ⓕ	C4503	C-3 Ⓕ	R645	D-4 Ⓕ	R2056	B-4 ©	R3011	D-5 Ⓕ	R3239	B-2 Ⓕ	RA2012	A-4 ©
C3231	A-2 Ⓕ	C4504	C-3 Ⓕ	R646	D-4 Ⓕ	R2057	B-2 ©	R3012	D-5 Ⓕ	R3240	B-2 Ⓕ	RA2013	A-6 Ⓕ
C3232	A-2 Ⓕ	C4505	C-3 Ⓕ	R647	D-4 Ⓕ	R2058	A-2 ©	R3013	D-5 Ⓕ	R3241	A-2 Ⓕ	RA2014	A-2 ©
C3233	A-2 Ⓕ	C4506	C-3 Ⓕ	R648	C-4 Ⓕ	R2059	A-5 Ⓕ	R3014	C-3 ©	R3242	A-3 Ⓕ	RA2016	B-5 Ⓕ
C3234	A-2 Ⓕ	C4507	C-3 Ⓕ	R649	C-4 Ⓕ	R2060	A-2 ©	R3016	D-3 ©	R3243	A-3 Ⓕ	RA2018	A-6 Ⓕ
C3235	A-3 Ⓕ	C4508	C-3 Ⓕ	R650	C-4 Ⓕ	R2061	A-3 ©	R3017	B-3 ©	R3244	B-3 Ⓕ	RA2023	A-4 ©
C3236	A-3 Ⓕ	C4509	B-4 Ⓕ	R651	C-3 Ⓕ	R2062	A-3 ©	R3018	D-7 Ⓕ	R3245	B-3 Ⓕ	RA2024	A-5 Ⓕ
C3237	A-3 Ⓕ	C4510	B-3 Ⓕ	R652	C-3 Ⓕ	R2063	A-3 ©	R3019	C-2 Ⓕ	R3247	A-3 Ⓕ	RA3803	B-7 Ⓕ
C3238	A-5 ©	C4511	B-3 Ⓕ	R653	C-3 Ⓕ	R2064	A-3 ©	R3020	C-3 ©	R3248	B-5 ©	RA3804	C-6 Ⓕ
C3239	B-3 Ⓕ	C4512	C-3 Ⓕ	R656	D-3 Ⓕ	R2065	A-3 ©	R3022	D-4 Ⓕ	R3249	A-3 Ⓕ	RA3805	C-6 Ⓕ
C3240	B-3 Ⓕ	C4513	B-5 ©	R658	D-3 Ⓕ	R2066	A-4 Ⓕ	R3023	D-4 Ⓕ	R3251	A-3 Ⓕ	RA3806	B-5 Ⓕ
C3241	B-3 Ⓕ	C4514	B-4 ©	R659	C-2 Ⓕ	R2067	A-5 Ⓕ	R3024	D-4 Ⓕ	R3252	A-3 Ⓕ	RA3807	B-6 Ⓕ
C3242	B-3 Ⓕ	C4515	B-4 Ⓕ	R661	D-3 Ⓕ	R2068	A-5 Ⓕ	R3027	C-5 Ⓕ	R3254	B-3 Ⓕ	RA3808	B-6 Ⓕ
C3243	C-3 Ⓕ	C4701	A-1 Ⓕ	R663	D-3 Ⓕ	R2069	B-2 ©	R3028	C-5 Ⓕ	R3255	B-3 Ⓕ	RA3809	B-6 Ⓕ
C3244	B-3 Ⓕ	C4702	A-1 Ⓕ	R664	D-2 Ⓕ	R2070	B-6 Ⓕ	R3030	C-5 Ⓕ	R3801	B-6 Ⓕ	RA4001	B-2 Ⓕ
C3245	A-2 Ⓕ	C4704	A-7 ©	R665	D-2 Ⓕ	R2072	C-4 ©	R3031	C-5 Ⓕ	R3803	B-6 Ⓕ	**Wire**	
C3246	B-2 Ⓕ	C4705	A-2 Ⓕ	R666	D-2 Ⓕ	R2073	C-4 ©	R3032	C-5 Ⓕ	R3804	C-7 Ⓕ		
C3247	A-3 Ⓕ	C4706	A-1 Ⓕ	R667	D-2 Ⓕ	R2074	C-4 ©	R3033	C-5 Ⓕ	R3805	C-7 Ⓕ	W602	C-3 Ⓕ
C3248	A-3 Ⓕ	C4798	A-1 Ⓕ	R668	D-2 Ⓕ	R2076	A-5 Ⓕ	R3034	C-3 ©	R3806	C-6 Ⓕ	W606	C-5 ©
C3249	B-3 Ⓕ	C4799	A-1 Ⓕ	R673	C-3 Ⓕ	R2077	A-5 Ⓕ	R3035	C-5 Ⓕ	R3807	C-6 Ⓕ	W610	C-6 ©
C3250	B-3 Ⓕ	C6501	D-6 Ⓕ	R674	C-3 Ⓕ	R2078	B-4 ©	R3036	C-2 Ⓕ	R3809	C-6 Ⓕ	W2001	D-7 Ⓕ
C3251	B-3 Ⓕ	C6502	C-7 ©	R680	D-3 Ⓕ	R2079	B-4 ©	R3037	D-4 Ⓕ	R3811	C-7 Ⓕ	W2002	D-7 Ⓕ
C3252	B-3 Ⓕ	C6503	C-6 ©	R681	C-3 Ⓕ	R2080	A-4 ©	R3038	D-5 Ⓕ	R3812	C-7 Ⓕ	W2004	D-7 Ⓕ
C3253	B-3 Ⓕ	C6504	D-1 ©	R682	D-3 Ⓕ	R2081	B-4 Ⓕ	R3039	D-4 Ⓕ	R3813	C-7 Ⓕ		
C3254	B-6 ©	**Resistor**		R683	C-3 Ⓕ	R2082	B-4 Ⓕ	R3042	D-3 ©	R3814	C-7 Ⓕ		
C3255	C-5 ©			R685	C-3 Ⓕ	R2083	B-4 Ⓕ	R3044	D-3 ©	R3815	C-6 Ⓕ		
C3256	B-5 ©	R507	C-2 Ⓕ	R690	C-3 Ⓕ	R2085	A-2 ©	R3046	D-5 Ⓕ	R3816	C-7 Ⓕ		
C3257	B-2 Ⓕ	R508	C-2 Ⓕ	R691	C-3 Ⓕ	R2087	C-4 ©	R3048	C-5 Ⓕ	R3834	B-5 Ⓕ		
C3258	B-6 ©	R509	C-2 Ⓕ	R692	C-5 ©	R2088	B-4 ©	R3049	C-5 Ⓕ	R3842	C-5 Ⓕ		
C3259	A-3 Ⓕ	R510	D-4 Ⓕ	R693	C-3 Ⓕ	R2089	A-3 ©	R3050	C-5 Ⓕ	R3844	C-5 Ⓕ		
C3261	A-5 ©	R511	D-2 Ⓕ	R694	C-2 Ⓕ	R2090	A-2 ©	R3051	C-5 Ⓕ	R3845	B-6 Ⓕ		
C3262	B-5 ©	R512	D-2 Ⓕ	R695	C-2 Ⓕ	R2091	B-3 ©	R3052	C-5 Ⓕ	R4001	A-7 ©		
C3264	A-4 Ⓕ	R513	D-4 Ⓕ	R696	C-2 Ⓕ	R2092	A-2 ©	R3053	C-4 Ⓕ	R4002	A-2 Ⓕ		
C3265	A-3 Ⓕ	R514	D-2 ©	R697	C-3 Ⓕ	R2093	A-4 ©	R3054	C-4 Ⓕ	R4003	B-6 ©		
C3802	B-6 Ⓕ	R515	D-2 ©	R698	C-3 Ⓕ	R2095	A-4 ©	R3055	D-6 Ⓕ	R4004	A-6 ©		
C3803	B-5 Ⓕ	R516	D-2 ©	R699	C-3 Ⓕ	R2096	B-4 Ⓕ	R3056	D-6 Ⓕ	R4011	B-6 ©		
C3804	B-5 Ⓕ	R517	D-2 ©	R2002	B-4 ©	R2097	B-4 Ⓕ	R3057	B-2 Ⓕ	R4012	A-6 ©		
C3806	B-6 Ⓕ	R518	D-3 ©	R2003	B-4 ©	R2098	B-4 ©	R3058	B-2 Ⓕ	R4013	B-6 ©		

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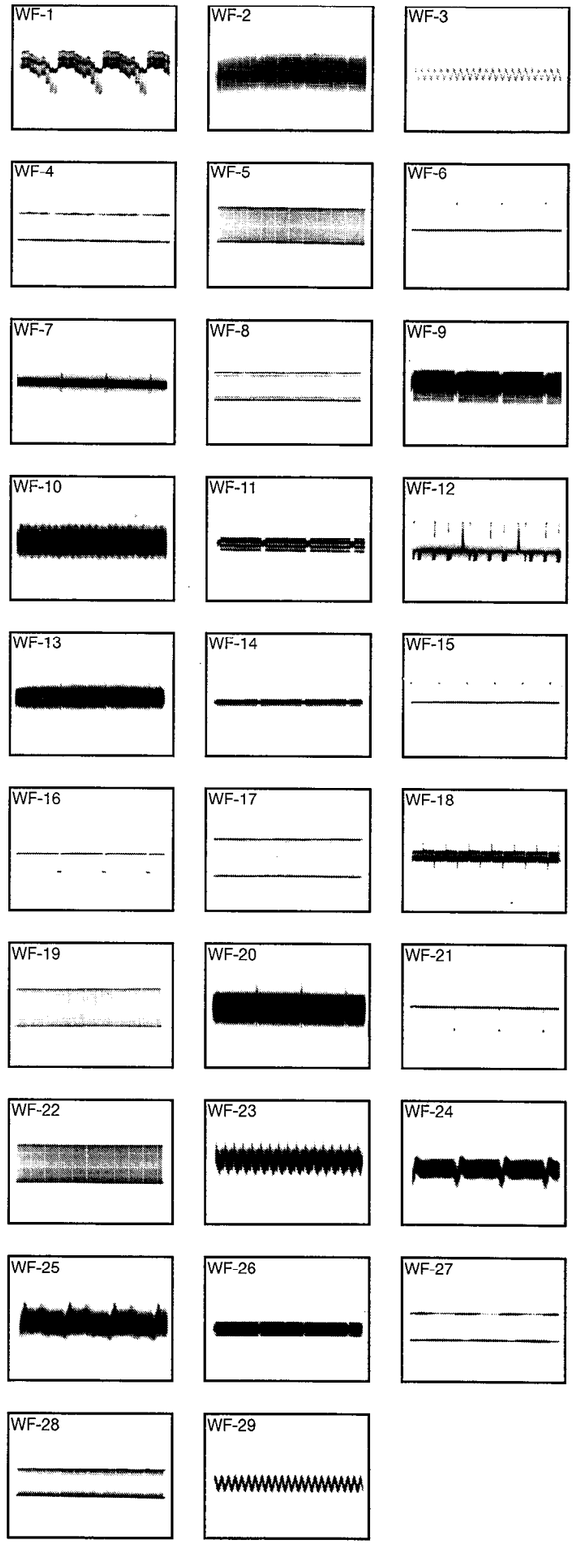
Checking Point of the CSP IC301

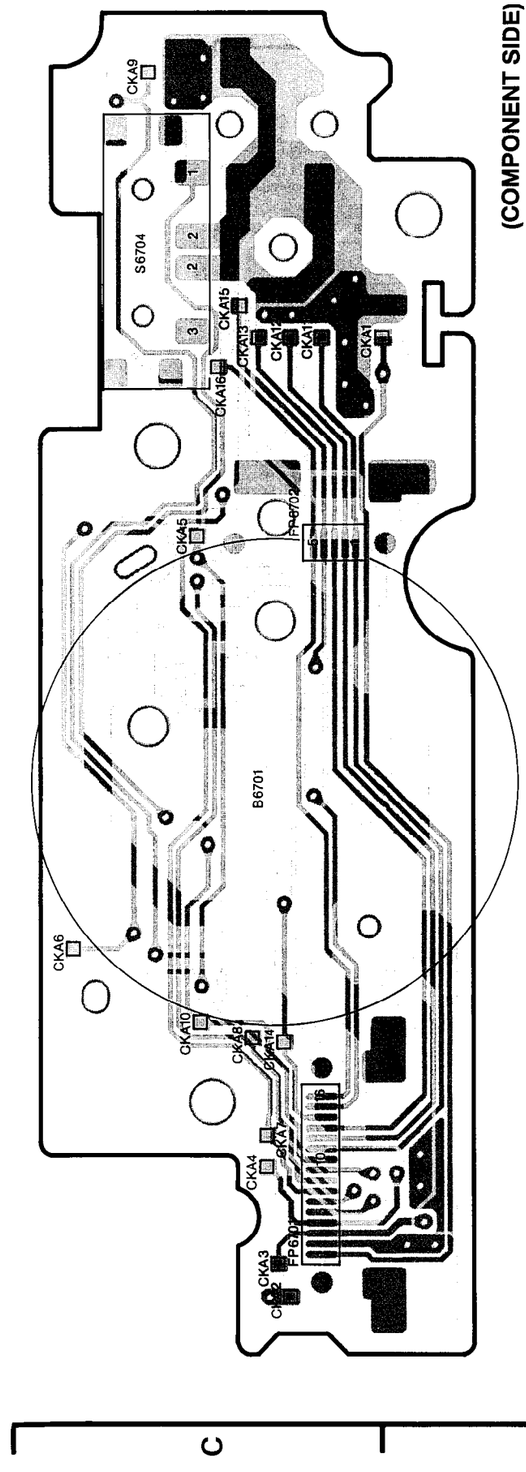
CSP IC301 PIN	CSP IC301 NAME	CHECK POINT		WF No.	REMARKS
1	POR	C326 - (LOWER)	B-3	WF-1	
2	PDOWN	QR310 - (B)	C-5	WF-2	
3	AVDD	C327 - (UPPER)	B-3	—	CAMERA 3V
4	VRT	C327 - (UPPER)	B-3	—	CAMERA 3V
5	VRB	GND	—	—	
6	DAOUT	IC702-10	D-2	WF-3	
7	AVSS	GND	—	—	
8	VZOUT7	IC3001-117	C-2	WF-4	
9	VZOUT6	IC3001-116	C-2	WF-4	
10	VZOUT5	IC3001-115	C-2	WF-4	
11	VZOUT4	IC3001-114	C-2	WF-4	
12	VZOUT3	IC3001-113	C-2	WF-4	VTR MAIN C.B.A. (C)
13	VZOUT2	IC3001-112	C-2	WF-4	
14	VZOUT1	IC3001-111	C-2	WF-4	
15	VZOUT0	IC3001-110	C-2	WF-4	
16	DDFCK	IC304-5	B-2	WF-5	
17	INV	IC3007-6	D-6	WF-6	VTR MAIN C.B.A. (F)
18	VDD	R334 - (UPPER)	A-2	—	REG D 2V
19	VSS	GND	—	—	
20	INH	IC3007-5	B-2	WF-7	VTR MAIN C.B.A. (F)
21	VZCOUT7	IC3001-106	C-2	WF-8	
22	VZCOUT6	IC3001-105	C-2	WF-8	
23	VZCOUT5	IC3001-104	C-2	WF-8	
24	VZCOUT4	IC3001-103	C-2	WF-8	VTR MAIN C.B.A. (C)
25	VZCOUT3	IC3001-102	C-2	WF-8	
26	VZCOUT2	IC3001-101	C-2	WF-8	
27	VZCOUT1	IC3001-100	C-2	WF-8	
28	VZCOUT0	IC3001-99	C-2	WF-8	
29	UVSELOUT	—	—	—	
30	PBHD	IC3001-76	C-2	WF-9	
31	PBVD	IC3001-77	C-2	WF-9	
32	VTR45M	IC3001-98	C-2	—	
33	PBCIN3	IC3001-81	D-2	WF-10	
34	PBCIN2	IC3001-80	D-2	WF-10	
35	PBCIN1	IC3001-79	D-2	WF-10	
36	PBCIN0	IC3001-78	D-2	WF-10	
37	PBYIN7	IC3001-96	D-2	WF-10	VTR MAIN C.B.A. (C)
38	PBYIN6	IC3001-95	D-2	WF-10	
39	PBYIN5	IC3001-94	D-2	WF-10	
40	PBYIN4	IC3001-93	D-2	WF-10	
41	PBYIN3	IC3001-92	D-2	WF-10	
42	PBYIN2	IC3001-91	D-2	WF-10	
43	PBYIN1	IC3001-90	D-2	WF-10	
44	PBYIN0	IC3001-89	D-2	WF-10	
45	MSEL1	GND	—	—	
46	PWM	R318 - (LOWER)	C-4	—	
47	V1V2	QR306 - (3)	D-6	WF-11	
48	BEND	QR305 - (3)	D-6	WF-11	
49	MVD	QR303 - (3)	A-2	WF-11	
50	ADRR8	GND	—	—	
51	ADRR7	GND	—	—	
52	ADRR6	GND	—	—	
53	ADRR5	GND	—	—	
54	VDD	R334 - (UPPER)	A-2	—	REG D 2V
55	VSS	GND	—	—	
56	ADRR4	GND	—	—	
57	ADRR3	IC302-11	C-6	WF-12	
58	ADRR2	IC302-12	C-6	WF-12	
59	ADRR1	IC302-13	C-6	WF-12	
60	ADRR0	IC302-14	C-6	WF-12	
61	DB7	IC302-15	C-6	WF-12	
62	DB6	IC302-18	C-6	WF-12	
63	DB5	IC302-19	C-6	WF-12	
64	DB4	IC302-20	C-6	WF-12	
65	DB3	IC302-21	C-6	WF-12	
66	DB2	IC302-22	C-6	WF-12	
67	DB1	IC302-23	C-6	WF-12	
68	DB0	IC302-24	C-6	WF-12	
69	ASTB	IC302-32	C-6	WF-13	
70	DSTB	IC302-31	C-6	WF-13	
71	RW	IC302-30	C-6	WF-13	
72	VDDH	L319 - (UPPER)	A-3	—	REG D 3V
73	TST3	GND	—	—	
74	TST2	GND	—	—	
75	TST1	QR304 - (C)	A-2	WF-14	
76	VD	IC202-17	B-5	WF-15	
77	HD	IC202-16	B-5	WF-16	
78	FCK	R250 - (LOWER)	A-5	—	
79	VDDH	L319 - (UPPER)	A-3	—	REG D 3V
80	ADIN9	RA304 - (2)	C-5	WF-17	
81	ADIN8	RA304 - (4)	C-5	WF-17	
82	ADIN7	RA304 - (6)	C-5	WF-17	
83	ADIN6	RA304 - (8)	C-5	WF-17	
84	ADIN5	RA306 - (2)	C-5	WF-17	
85	ADIN4	RA306 - (4)	C-5	WF-17	
86	ADIN3	RA306 - (6)	C-5	WF-17	
87	ADIN2	RA306 - (8)	C-5	WF-17	
88	ADIN1	RA307 - (2)	C-4	WF-17	
89	ADIN0	RA307 - (4)	C-4	WF-17	
90	VDD	R334 - (UPPER)	A-2	—	REG D 2V
91	VSS	GND	—	—	
92	TST0	QR304 - (C)	A-2	WF-14	
93	TST4	QR304 - (C)	A-2	WF-14	
94	DSEL	R334 - (UPPER)	A-2	—	REG D 2V
95	VCTRLO	R340 - (RIGHT)	A-3	WF-18	
96	FCK2	R249 - (RIGHT)	A-5	WF-19	

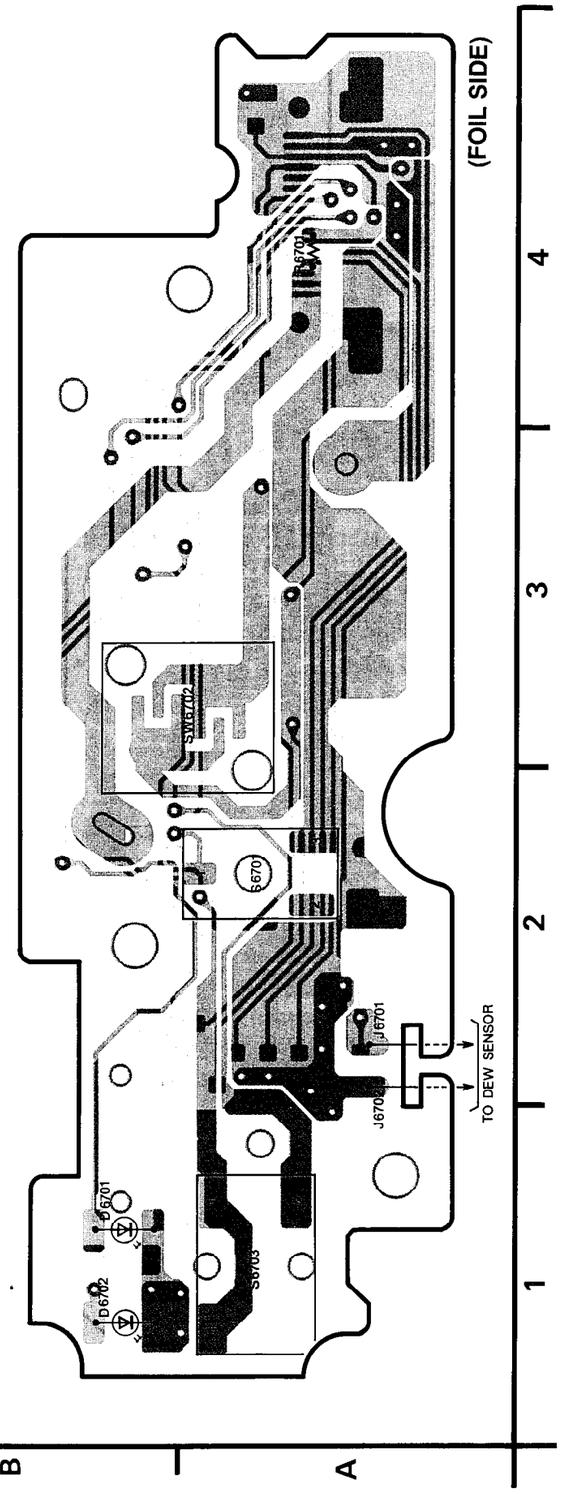
VTR MAIN C.B.A. (F): FOIL SIDE / (C):COMPONENT SIDE

CSP IC301		CHECK POINT		WF No.	REMARKS
PIN	NAME				
97	NHRST	—	—	—	
98	TDO	IC3002-47	C-4	WF-20	VTR MAIN C.B.A. (C)
99	TDI	IC3001-150	B-2	WF-20	
100	TMD	IC3001-147	B-2	WF-20	
101	TCK	IC3001-148	B-2	WF-20	
102	FMPOR	IC304-68	A-2	WF-14	
103	FMOE	CL318	A-3	WF-14	
104	FMRAD	IC304-65	A-2	WF-14	
105	FMRSTR	IC304-63	A-2	WF-21	
106	FMRE	IC304-66	A-2	WF-22	
107	FMRWAE	IC304-64	A-2	WF-23	
108	FMWAD	IC304-7	B-2	WF-14	
109	FMRSTW	IC304-9	B-2	WF-24	
110	FMWE	IC304-6	B-2	WF-25	
111	FMYOUT7	IC304-50	A-1	WF-26	
112	FMYOUT6	IC304-51	A-1	WF-26	
113	FMYOUT5	IC304-52	A-1	WF-26	
114	FMYOUT4	IC304-53	A-1	WF-26	
115	FMYOUT3	IC304-56	A-2	WF-26	
116	FMYOUT2	IC304-57	A-2	WF-26	
117	FMYOUT1	IC304-58	A-2	WF-26	
118	FMYOUT0	IC304-59	A-2	WF-26	
119	FMCOUT3	IC304-44	A-1	WF-26	
120	FMCOUT2	IC304-45	A-1	WF-26	
121	FMCOUT1	IC304-46	A-1	WF-26	
122	FMCOUT0	IC304-47	A-1	WF-26	
123	VZPLSTST	—	—	—	
124	HZPLSTST	—	—	—	
125	FMYIN7	IC304-20	B-1	WF-27	
126	VDD	R334 - (UPPER)	A-2	—	REG D 2V
127	VSS	GND	—	—	
128	FMYIN6	IC304-19	B-1	WF-27	
129	FMYIN5	IC304-18	B-2	WF-27	
130	FMYIN4	IC304-17	B-2	WF-27	
131	FMYIN3	IC304-16	B-2	WF-27	
132	FMYIN2	IC304-15	B-2	WF-27	
133	FMYIN1	IC304-14	B-2	WF-27	
134	FMYIN0	IC304-13	B-2	WF-27	
135	FMCIN3	IC304-27	B-1	WF-28	
136	FMCIN2	IC304-26	B-1	WF-28	
137	FMCIN1	IC304-25	B-1	WF-28	
138	FMCIN0	IC304-24	B-1	WF-28	
139	ACOMP	IC702-33	C-6	WF-26	
140	BCOMP	IC702-32	C-6	WF-26	
141	SIG	IC702-34	C-6	WF-29	
142	FCA	IC702-43	C-7	WF-29	
143	FCB	IC702-42	C-7	WF-29	
144	FC2	IC702-41	C-7	WF-29	

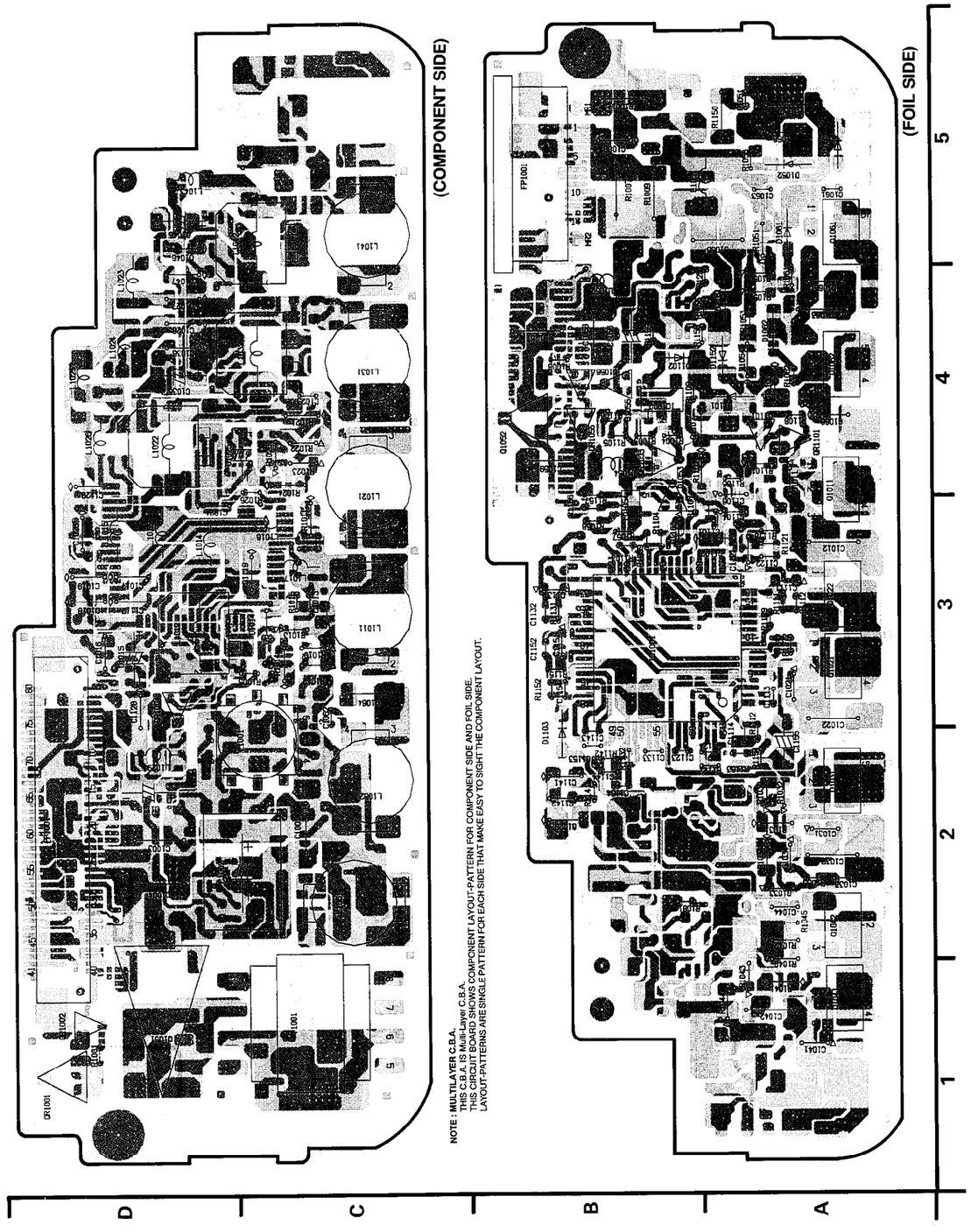


3-35. REAR OPERATION C.B.A. (VEP06C16A)





3-36. POWER C.B.A. (VEP01801A)



Back Page:
REAR OPERATION C.B.A. Section

POWER C.B.A.

C1031	A-2	C1113	A-3	R1009	B-5	R1061	A-4	L1032	C-4	D1062	A-4
C1032	A-2	C1114	A-2	R1010	C-3	R1062	A-4	L1041	C-4	D1101	A-4
C1033	A-2	C1117	D-3	R1011	C-3	R1081	B-2	L1042	C-5	D1102	B-4
C1034	A-2	C1118	D-2	R1012	C-3	R1101	A-4	L1043	D-5	D1103	B-2
C1035	D-4	C1119	C-3	R1013	C-3	R1102	B-4	L1051	A-5	D1151	A-4
C1036	D-4	C1121	A-3	R1014	C-3	R1103	B-3	L1052	B-4	D1152	A-4
C1041	A-1	C1122	A-3	R1015	C-3	R1104	B-3	L1054	B-4	**Connector**	
C1042	A-1	C1123	B-2	R1020	C-4	R1105	B-4	L1061	C-2	FP1001	B-5
C1044	A-2	C1124	A-2	R1021	C-4	R1106	B-4	L1062	C-2	PP1001	D-2
C1045	D-5	C1128	D-3	R1022	C-4	R1107	B-3	**Capacitor**		**IP**	
C1046	D-5	C1129	D-4	R1023	C-4	R1108	A-4	C1001	C-2	IP1001	B-5
C1047	D-4	C1131	B-3	R1024	C-4	R1109	B-4	C1002	D-2	**Tranformer**	
C1051	A-5	C1132	B-3	R1025	C-3	R1111	A-3	C1003	D-2	T1001	C-1
C1052	A-5	C1133	B-2	R1030	A-2	R1112	A-2	C1004	D-2	**Coil**	
C1053	A-5	C1134	B-2	R1031	A-2	R1121	A-3	C1009	B-5	L1001	C-2
C1055	A-5	C1141	B-2	R1032	A-2	R1122	A-2	C1011	A-4	L1011	C-3
C1056	A-5	C1142	B-2	R1033	A-2	R1131	B-3	C1012	A-3	L1012	D-3
C1058	B-4	C1143	B-2	R1034	A-2	R1132	B-2	C1013	C-3	L1013	D-3
C1059	B-4	C1144	B-2	R1035	A-2	R1136	B-4	C1014	C-3	L1014	D-3
C1061	A-5	C1151	B-3	R1040	A-2	R1141	B-2	C1015	D-3	L1015	D-3
C1062	C-3	C1152	B-3	R1041	A-1	R1142	B-2	C1016	D-3	L1016	C-3
C1063	A-4	C1153	B-2	R1042	A-2	R1150	A-5	C1017	D-3	L1017	C-3
C1064	C-3	C1154	B-3	R1043	A-1	R1151	B-3	C1018	D-3	L1021	C-3
C1065	A-4	C1155	A-2	R1044	A-1	R1152	B-3	C1019	D-3	L1022	D-4
C1066	A-4	C1156	B-4	R1045	A-2	R1153	A-2	C1021	A-3	L1023	D-4
C1101	A-3	C1251	B-4	R1050	A-4	R1154	A-2	C1022	A-3	L1024	D-4
C1102	A-3	**Resistor**		R1051	A-5	R1155	A-4	C1023	C-4	L1025	D-4
C1103	B-3	R1001	D-1	R1052	A-4	R1156	B-3	C1024	D-3	L1026	D-4
C1104	A-3	R1003	B-4	R1053	A-4	R1157	B-3	C1025	D-4	L1027	D-4
C1105	A-4	R1004	B-4	R1054	A-4	R1158	A-4	C1026	D-3	L1028	D-4
C1106	A-3	R1005	C-3	R1056	A-5	R1159	B-4	C1027	D-4	L1029	B-2
C1107	B-4	R1007	B-5	R1057	B-3	R1178	A-3	C1028	D-4	L1031	C-4
C1111	A-3	R1008	B-4	R1058	B-3	R1179	A-3	C1029	B-2		
C1112	A-3			R1059	B-3						

Integrated Circuit

IC1001	B-3
IC1002	B-4

Transistor

Q1011	A-4
Q1021	A-3
Q1022	A-2
Q1031	A-1
Q1041	A-2
Q1042	D-1
Q1051	B-4
Q1052	B-4
Q1053	B-3
Q1054	B-4
Q1055	B-4,
Q1056	A-5
Q1061	A-4
Q1062	A-4
Q1101	

Transistor & Resistor

QR1001	D-1
QR1002	D-1
QR1003	B-4
QR1004	D-3
QR1055	B-4
QR1101	A-4

Diode

D1051	A-5
D1052	A-5
D1061	A-5

ADDRESS INFORMATION

3-37. HEAD AMP C.B.A. (VEP05352A)

HEAD/REC AMP C.B.A.

Integrated Circuit	
IC5001	B-1

Transistor	
Q5002	B-2
Q5003	C-1
Q5005	B-2
Q5006	C-2

Connector	
FP5001	C-2

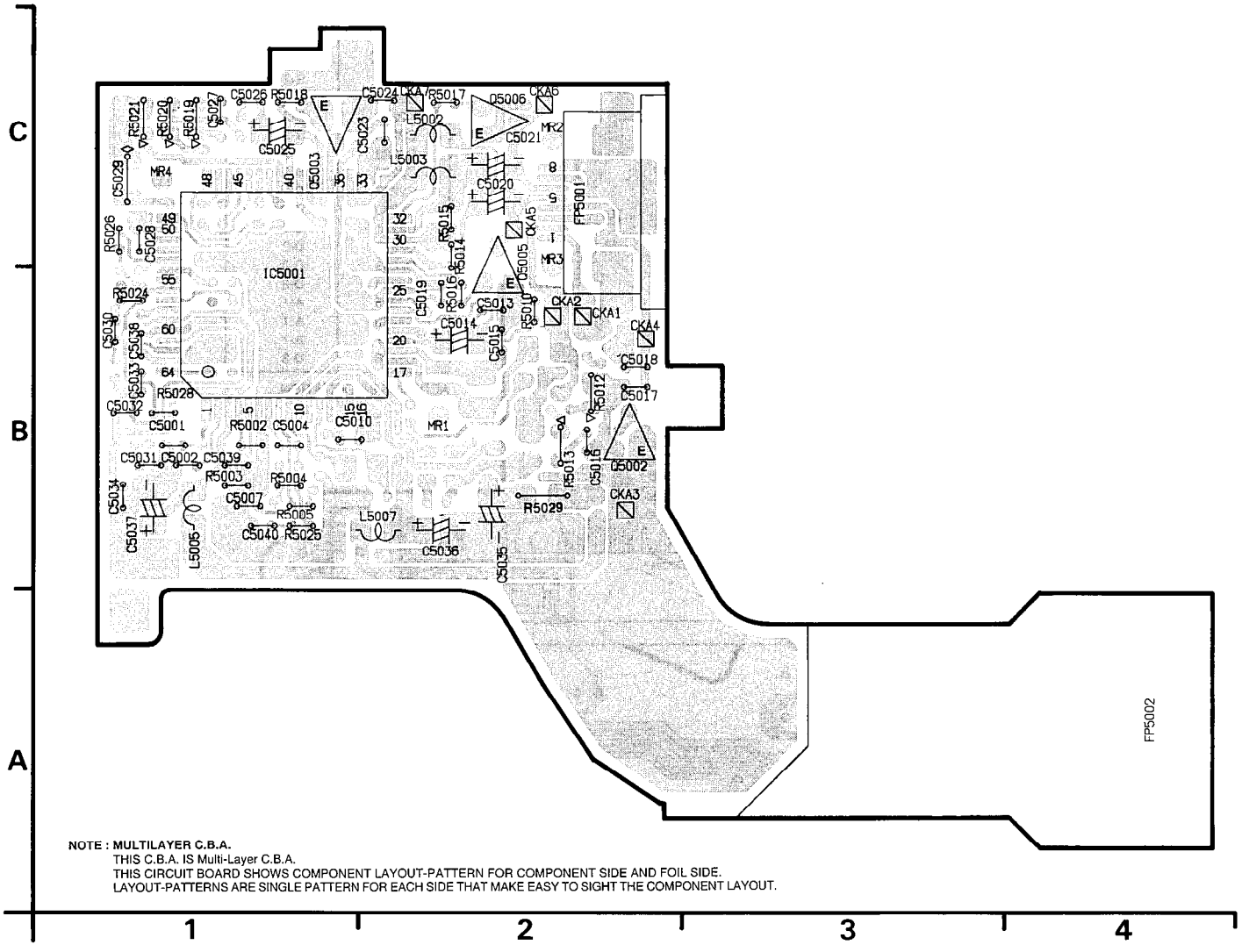
Coil	
L5002	C-2

L5003	C-2
L5005	B-1
L5007	B-2

Capacitor	
C5001	B-1
C5002	B-1
C5004	B-1
C5007	B-1
C5010	B-1
C5013	B-2
C5014	B-2
C5015	B-2
C5016	B-2
C5017	B-2
C5018	B-2
C5019	B-2
C5020	C-2
C5021	C-2
C5023	C-2
C5024	C-2
C5025	C-1
C5026	C-1
C5027	C-1
C5028	C-1
C5029	C-1
C5030	B-1
C5031	B-1
C5032	B-1
C5033	B-1
C5034	B-1
C5035	B-2
C5036	B-2
C5037	B-1
C5038	B-1
C5039	B-1
C5040	B-1

Resistor	
R5002	B-1
R5003	B-1
R5004	B-1
R5005	B-1
R5010	B-2
R5012	B-2
R5013	B-2
R5014	C-2
R5015	C-2
R5016	B-2
R5017	C-2
R5018	C-1
R5019	C-1
R5020	C-1
R5021	C-1
R5024	B-1
R5025	B-1
R5026	C-1
R5028	B-1
R5029	B-2

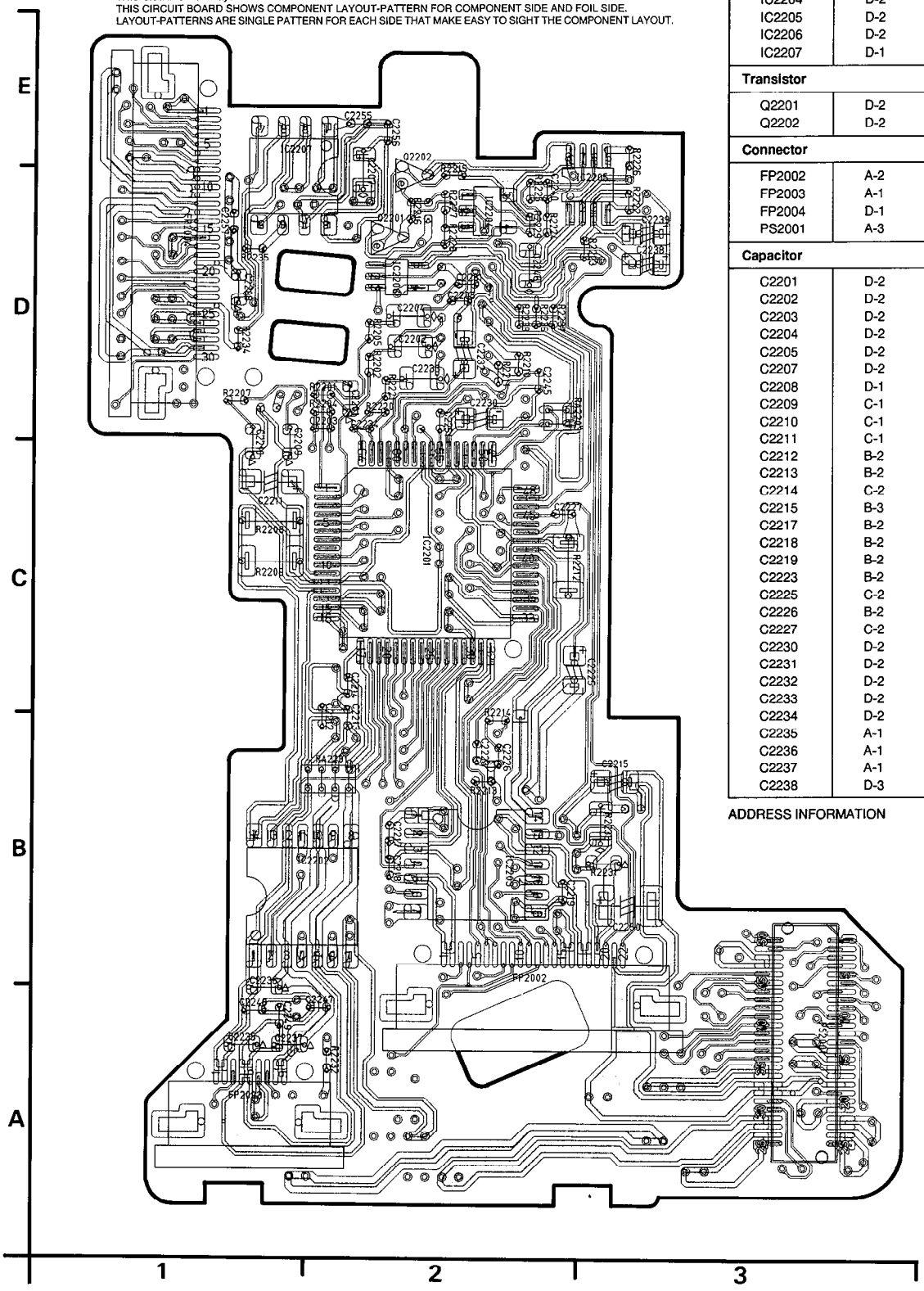
ADDRESS INFORMATION



NOTE : MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A.
THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE.
LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

3-38. DRIVE C.B.A. (VEP02561A)

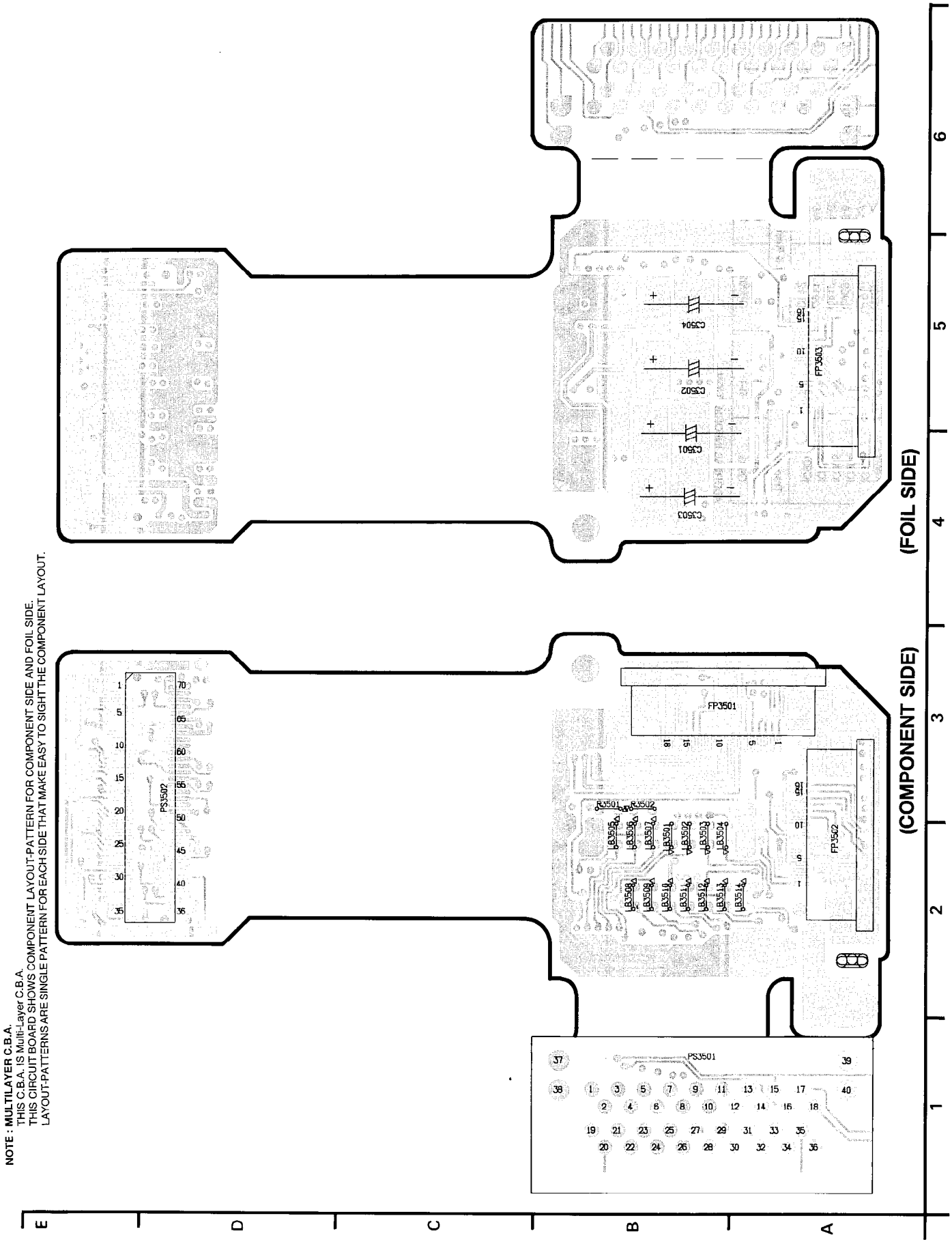
NOTE : MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A.
THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE.
LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



DRIVE C.B.A.			
Integrated Circuit		C2239	D-3
IC2201	C-2	C2240	D-2
IC2202	B-1	C2245	D-2
IC2203	B-2	C2246	D-2
IC2204	D-2	C2247	A-2
IC2205	D-2	C2248	A-1
IC2206	D-2	C2249	A-1
IC2207	D-1	C2250	B-3
Transistor		C2251	D-2
Q2201	D-2	C2255	E-2
Q2202	D-2	C2256	E-2
Connector		C2257	D-1
FP2002	A-2	**Resistor**	
FP2003	A-1	R2201	D-2
FP2004	D-1	R2202	D-2
PS2001	A-3	R2204	D-2
Capacitor		R2205	D-2
C2201	D-2	R2207	D-1
C2202	D-2	R2208	C-1
C2203	D-2	R2209	C-1
C2204	D-2	R2210	D-2
C2205	D-2	R2211	D-2
C2207	D-2	R2212	C-2
C2208	D-1	R2213	B-2
C2209	C-1	R2214	B-2
C2210	C-1	R2215	D-2
C2211	C-1	R2216	D-2
C2212	B-2	R2220	D-2
C2213	B-2	R2221	D-2
C2214	C-2	R2222	D-3
C2215	B-3	R2223	D-2
C2217	B-2	R2224	D-2
C2218	B-2	R2225	D-2
C2219	B-2	R2226	E-3
C2223	B-2	R2227	D-2
C2225	C-2	R2228	D-2
C2226	B-2	R2229	D-2
C2227	C-2	R2231	B-3
C2230	D-2	R2232	A-2
C2231	D-2	R2233	B-3
C2232	D-2	R2234	D-1
C2233	D-2	R2235	D-1
C2234	D-2	R2236	D-2
C2235	A-1	R2237	D-2
C2236	A-1	R2238	D-2
C2237	A-1	**Resistor Array**	
C2238	D-3	RA2201	B-2
		RA2203	D-2

ADDRESS INFORMATION

3-39. LCD I/F C.B.A. (VEP00Y65A)

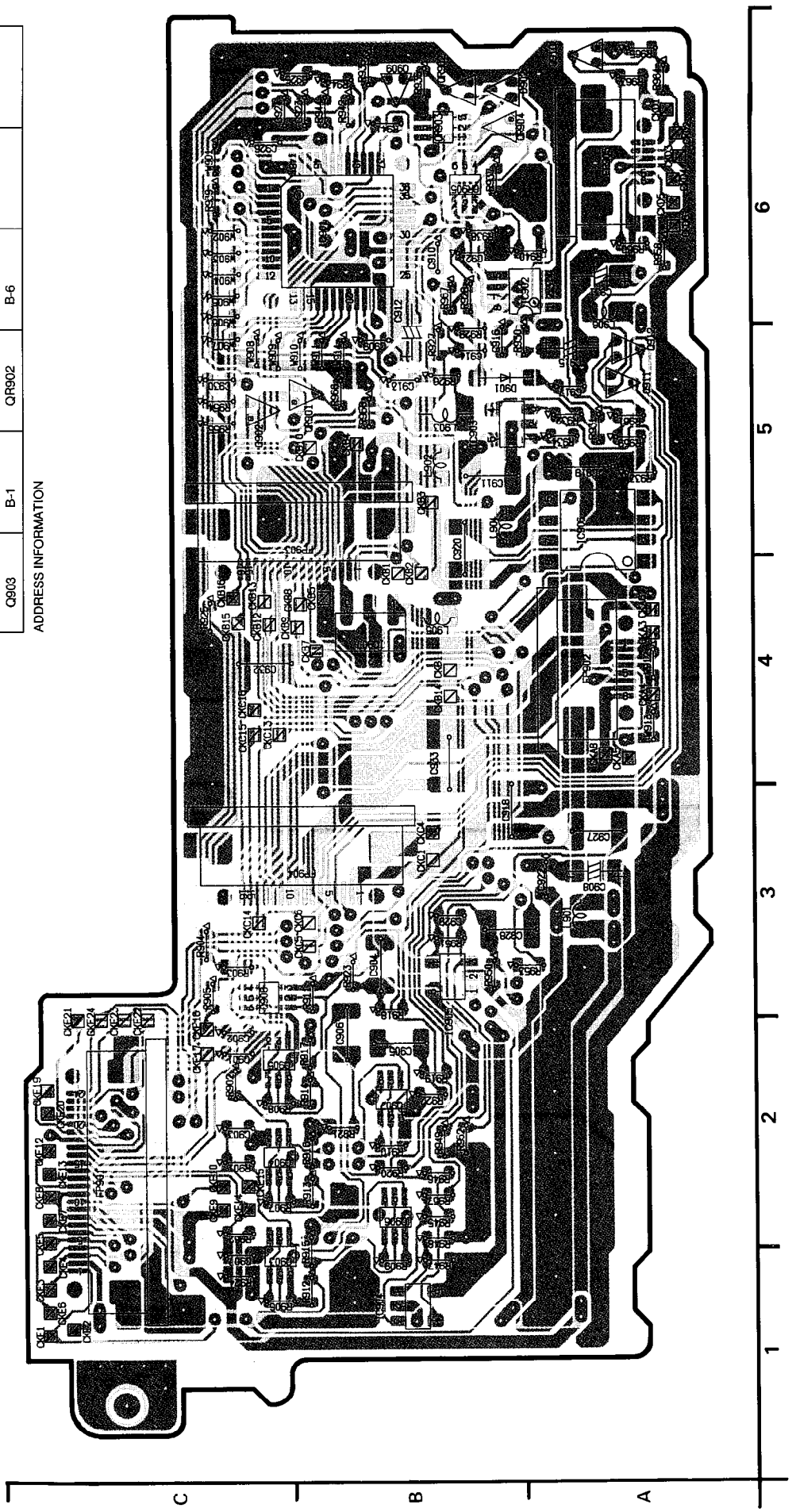


NOTE : MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A.
THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE.
LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

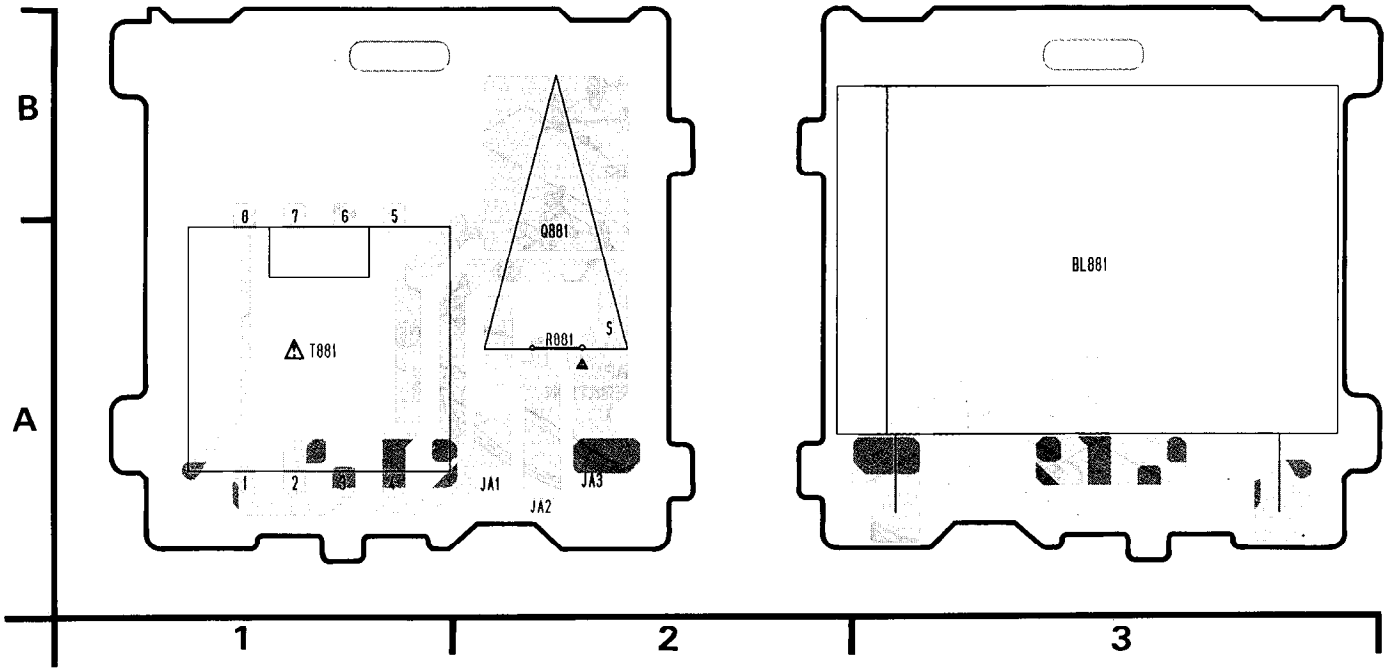
3-40. MONITOR C.B.A. (VEP26196B) FOR NV-DS5

MONITOR C.B.A.					
Integrated Circuit		Q904	C-2	QR903	B-6
IC901	B-6	Q905	C-2	QR904	B-6
IC902	A-6	Q906	B-2	QR905	B-6
IC903	B-5	Q907	B-2	**Connector**	
IC904	B-1	Q908	C-3	FP901	C-2
IC905	B-3	Q909	B-6	FP902	A-4
IC906	A-5	Q910	A-6	FP903	B-5
IC907	B-4	Q911	A-5	FP904	B-3
Transistor		Q912	A-5	FP905	A-6
Q902	C-5	**Transistor & Resistor**			
Q903	B-1	QR901	B-5		
		QR902	B-6		

ADDRESS INFORMATION

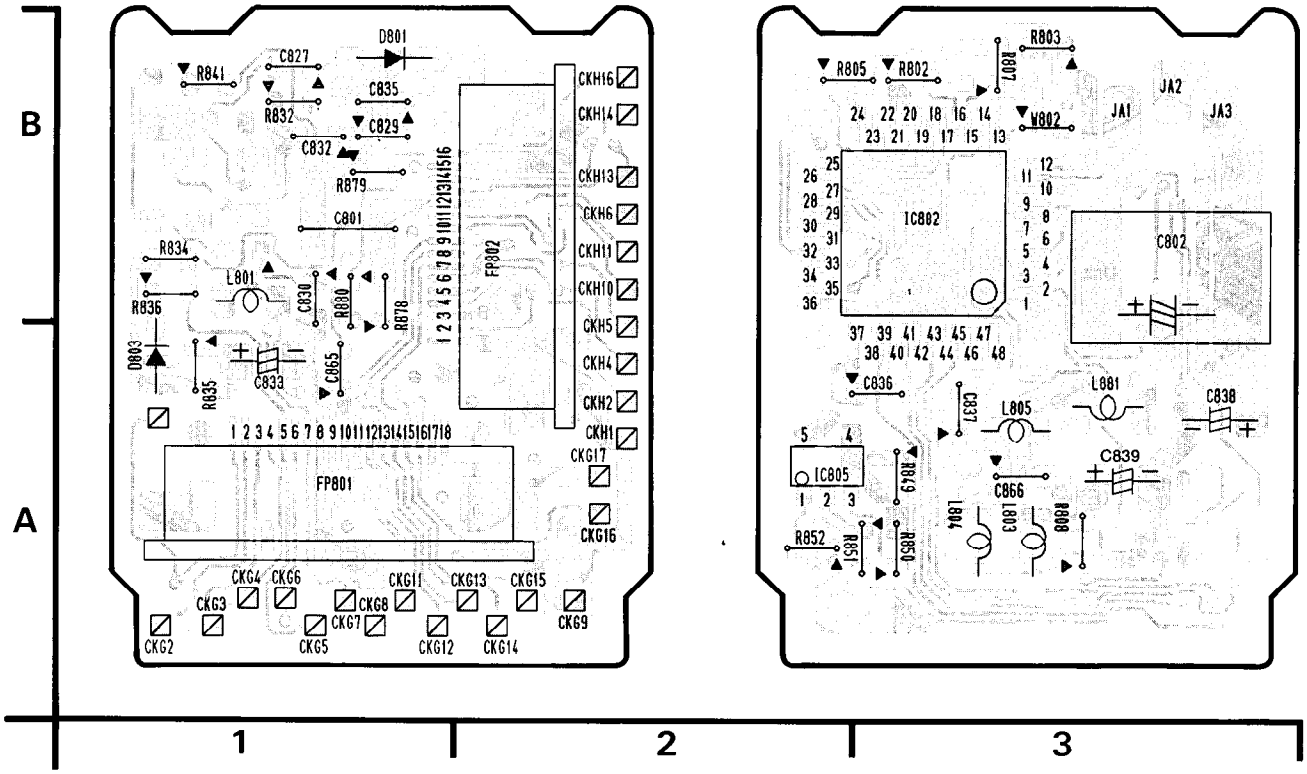


3-41. EVF (A) C.B.A. (VEP28240C)



3-42. EVF (B) C.B.A. (VEP28244A)

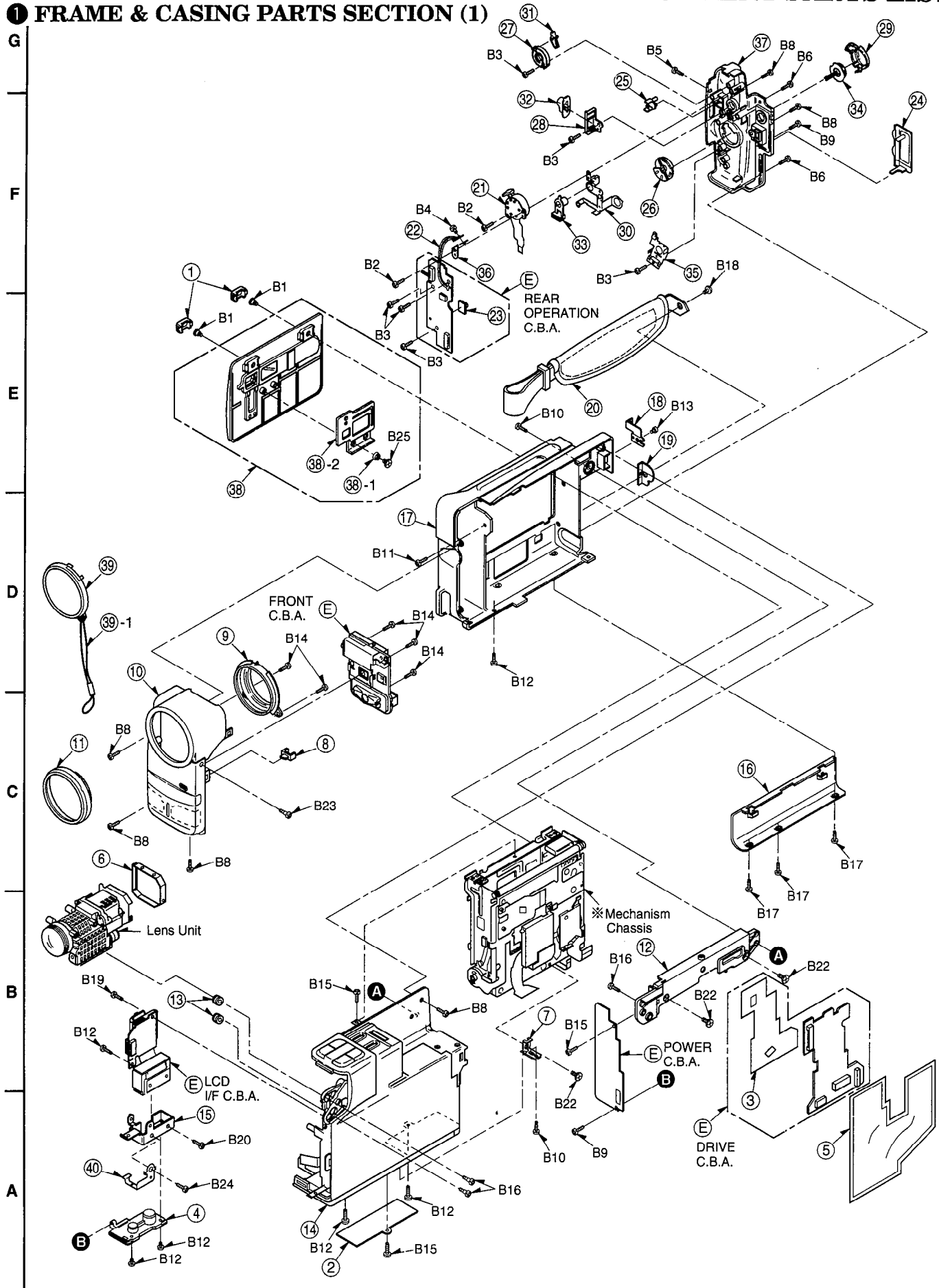
NOTE : MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A.
THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE.
LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



SECTION 4 EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEWS & MECHANICAL REPLACEMENT PARTS LIST

❶ FRAME & CASING PARTS SECTION (1)



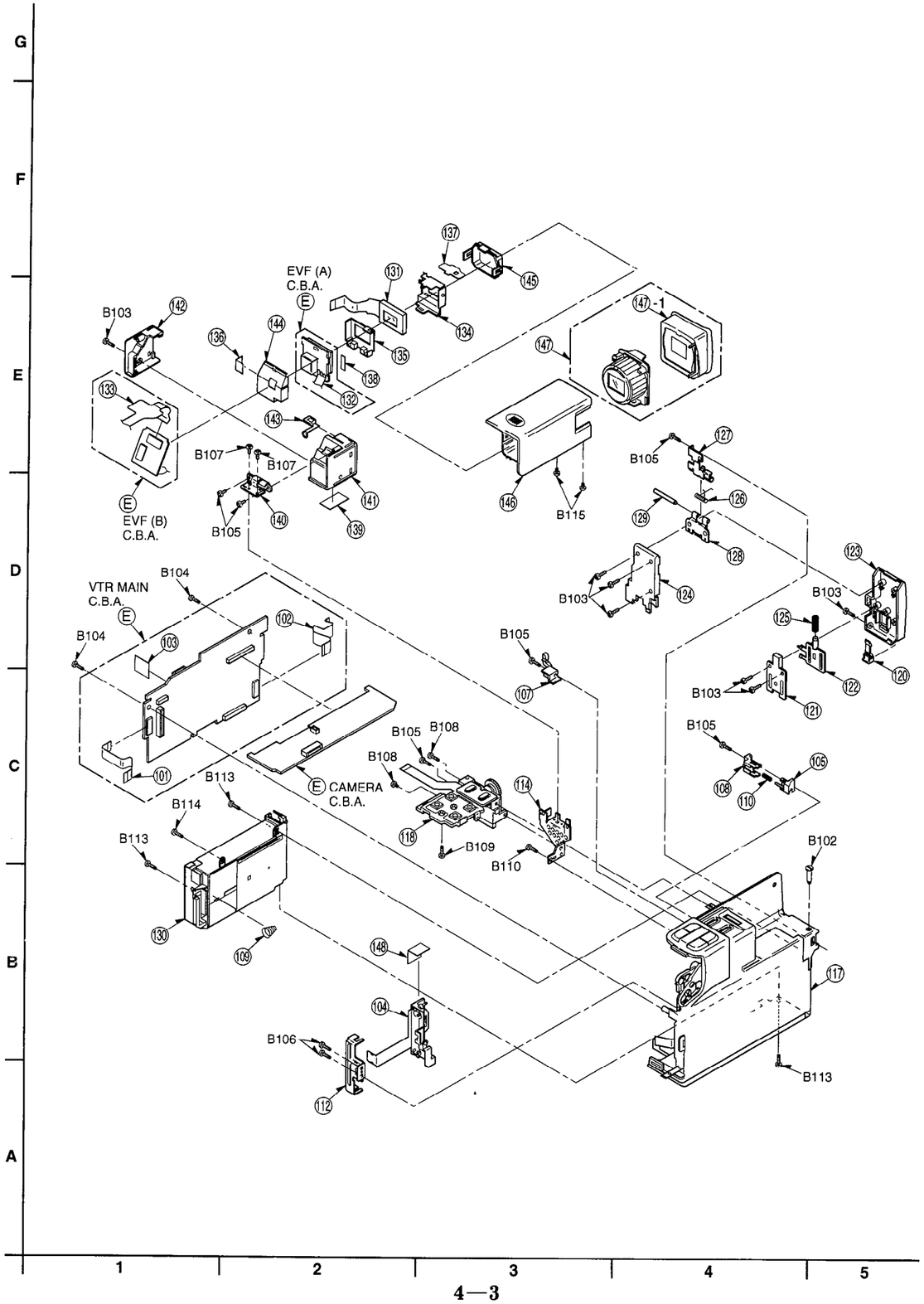
1. FRAME & CASING PARTS SECTION (1)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VGP4575	SCREW CAP	2	
2	VKF2732	EVR COVER	1	
3	VMZ2689	BARRIER	1	
4	VMD2798	TRIPOD FRAME	1	
5	VMZ2708	BER BARRIER	1	
6	VSC4618	CCD SHIELD CASE	1	
7	VXA5933	MECH. FIXING ANGLE U.	1	
8	VGL0765	TALLY PANEL	1	
9	VGQ4498	FRONT SCREW	1	
10	VYK8057	FRONT CASE (1) U.	1	
11	VYQ1485	LENS HOOD U.	1	
12	VYK7682	MECH. FIXING PIECE U.	1	
13	VMG1056	RUBBER	2	
14	VYK8052	SIDE CASE R (2) U.	1	
15	VMP5408	MULTICONNECTOR ANGLE A	1	
16	VGQ4495	GRIP COVER	1	
17	VYK8061	SIDE CASE L (1) U.	1	
18	VMA9749	REAR FIXING ANGLE	1	
19	VMA9770	GRIP ANGLE	1	
20	VYC0795	GRIP BELT U.	1	
21	VEK8154	ZOOM OPERATION U.	1	
22	VEK8160	DEW SENSOR	1	
23	VMG0763	SWITCH	1	
24	VGF0707	JACK COVER	1	
25	VGL0764	VTR CHANGE PANEL	1	
26	VGQ4272	S/S BUTTON PIECE	1	
27	VGQ4492	PHOTO SHOT BUTTON HOLDER	1	
28	VGQ4493	EJECT BUTTON HOLDER	1	
29	VGQ4494	S/S LEVER	1	
30	VGQ4515	B ESD PLATE	1	
31	VGU7574	PHOTO SHOT BUTTON	1	
32	VGU7575	EJECT BUTTON	1	
33	VGU7576	VTR CHANGE BUTTON	1	
34	VGU7577	S/S BUTTON	1	
35	VMC1271	S/S CLICK SPRING	1	
36	VMP5412	DEW FIXING ANGLE	1	
37	VYK8059	REAR CASE (1) U.	1	
38	VYK7929	CASSETTE COVER U.	1	
38-1	VMB3148	CASSETTE COVER SPRING	1	
38-2	VMP5413	CASSETTE FIXING BASE	1	
39	VYF2507	LENS HOOD CAP U.	1	
39-1	VGQ2750	FOOD STRAP	1	
40	VMP5552	MULTICONNECTOR ANGLE B	1	
*	VXY1273	MECHA CHASSIS	1	
B1	VHD1100	SCREW	2	
B2	XQN16+BJ5	SCREW	2	
B3	XQN2+BJ4	SCREW	6	
B4	XQN16+B15	SCREW	1	
B8, B9	XQN16+B5FZ	SCREW	3	
B10	XQN2+BJ6FN	SCREW	1	
B11	XQN2+B3FN	SCREW	1	
B12	XQN16+B3FZ	SCREW	5	
B13	XQN2+B25	SCREW	1	
B14	XQN16+BJ4	SCREW	5	
B15	XQN16+BJ4FZ	SCREW	3	
B16	VHD1096	SCREW	3	
B17	XQN16+B25FZ	SCREW	3	
B18	VHD1179	SCREW	1	
B19	XQN2+BJ35FZ	SCREW	1	
B20	XQN2+B3FZ	SCREW	1	
B21	XQN2+B4FZ	SCREW	1	
B22	VHD0866	SCREW	3	
B23	XQN14+AJ5FN	SCREW	1	
B24	XQN2+B3FZ	SCREW	1	
B25	VHD1105	SCREW	1	

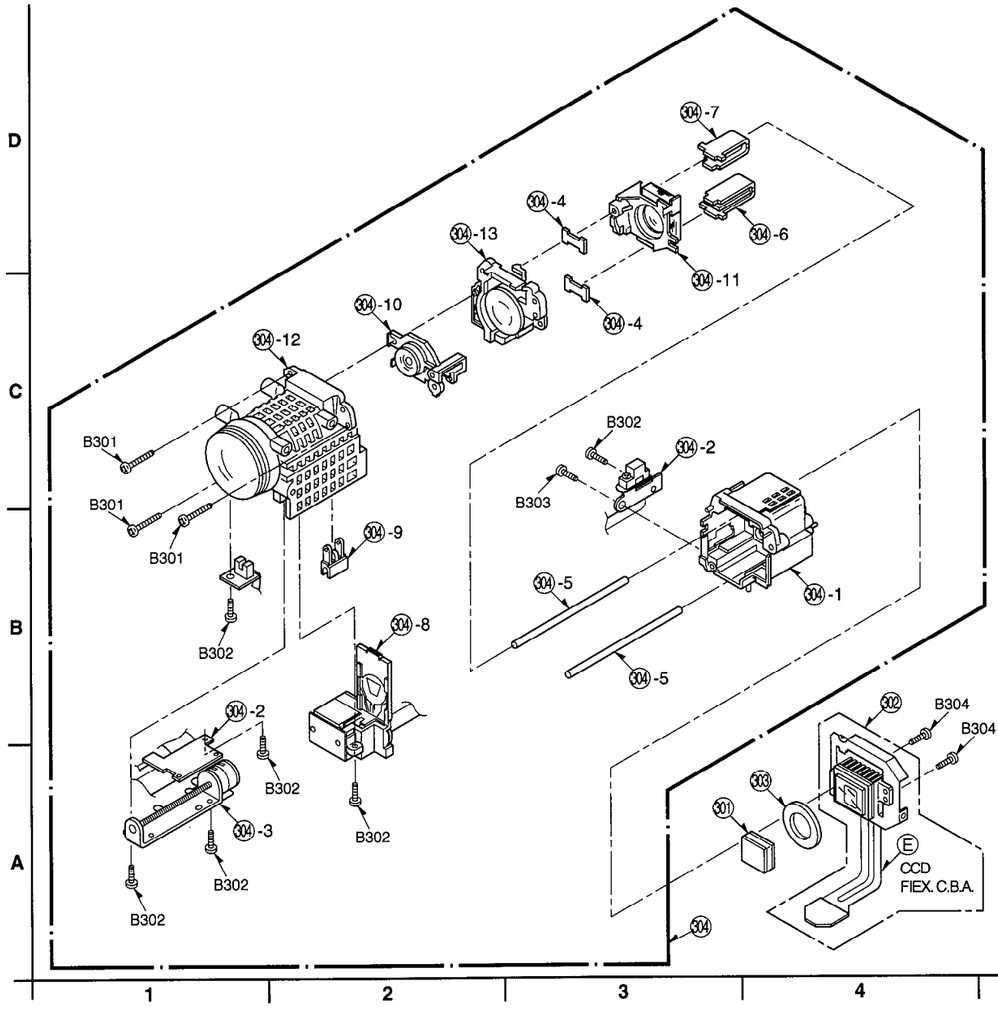
2. FRAME & CASING PARTS SECTION (2)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
101	VWJ13C8045AA	MAIN-FRONT FLEX. CARD	1	FP4001-FP4801
102	VWJ16C8050AA	MAIN-REAR OP.. FLEX. CARD	1	FP6002-FP6701
103	VGQ4644	MAIN BARRIER	1	
104	VEK8161	BATTERY TERMINAL U.	1	
105	VGU7557	BATTERY LOCK KNOB	1	
107	VGQ4688	R-CAP	1	
108	VGQ4448	BATTERY LOCK HOLDER	1	
109	VMB2805	BATTERY PUSHING SPRING	1	
110	VMB3143	BATTERY LOCK SPRING	1	
112	VMP5386	BATTERY FIXING ANGLE	1	
114	VMP5389	EVF FIXING ANGLE	1	
117	VYK8052	SIDE CASE R (2) U.	1	
118	VYK8053	TOP OPERATION P.C.BOARD	1	
120	VGQ4446	BATTERY DOOR COVER	1	
121	VGQ4447	DOOR KNOB HOLDER	1	
122	VGU7556	BATTERY DOOR KNOB	1	
123	VKF2802	BATTERY DOOR (TOP)	1	
124	VKF2734	BATTERY DOOR (BOTTOM)	1	
125	VMB2815	EYE CAP LOCK SPRING	1	
126	VMB3144	BATTERY DOOR SPRING	1	
127	VMP5390	BATTERY DOOR ROTARY ANGLE	1	
128	VMP5391	BATTERY DOOR FIXING ANGLE	1	
129	VMS6210	BATTERY DOOR SHAFT	1	
130	VKM4833	BATTERY CASE	1	
131	F05KM100	LCD PANEL	1	
132	VJB28242	EVF CONNECT FLEX. CARD	1	
133	VJB08294	EVF FLEX. CARD	1	FP801-FP3501
134	VGQ4664	LCD FIXING HOLDER	1	
135	VGQ4481	LAMP HOLDER	1	
136	VGQ4575	LCD FLEX. CARD GUARD	1	
137	VGQ4576	LAMP BARRIER	1	
138	VGQ4615	SHIELD SHEET	1	
139	VGQ4649	EVF SLIDE SPACER	1	
140	VKC0553	EVF ROTARY SHAFT U.	1	
141	VKM4824	EVF CASE (L)	1	
142	VKM4825	EVF CASE (R)	1	
143	VMC1357	EVF CLICK SPRING	1	
144	VSC4650	SHIELD CASE (B)	1	
145	VKW2427	EVF PROTECT PIECE	1	
146	VYK8055	SLIDE CASE U.	1	
147	VYK8126	EYE SIGHT CASE U.	1	
147-1	VMG1078	EYE CAP	1	
148	VGQ4524	BLIND BARRIER	1	
B101	VHD0768	SCREW	2	
B102	VHD1129	SCREW	1	
B103	XQN16+BJ4FZ	SCREW	7	
B104	VHD1099	SCREW	2	
B105, 06	XQN2+BJ5FN	SCREW	3	
B107	VHD1122	SCREW	2	
B108	XQN2+BJ35FZ	SCREW	4	
B109	XQN16+BJ6FN	SCREW	1	
B110	XQN2+BJ4	SCREW	1	
B112	XQN2+B4FZ	SCREW	1	
B115	XQS16+C3FN	SCREW	2	
B116	XQN2+B3FN	SCREW	2	

❷ FRAME & CASING PARTS SECTION (2)



❸ CAMERA LENS SECTION



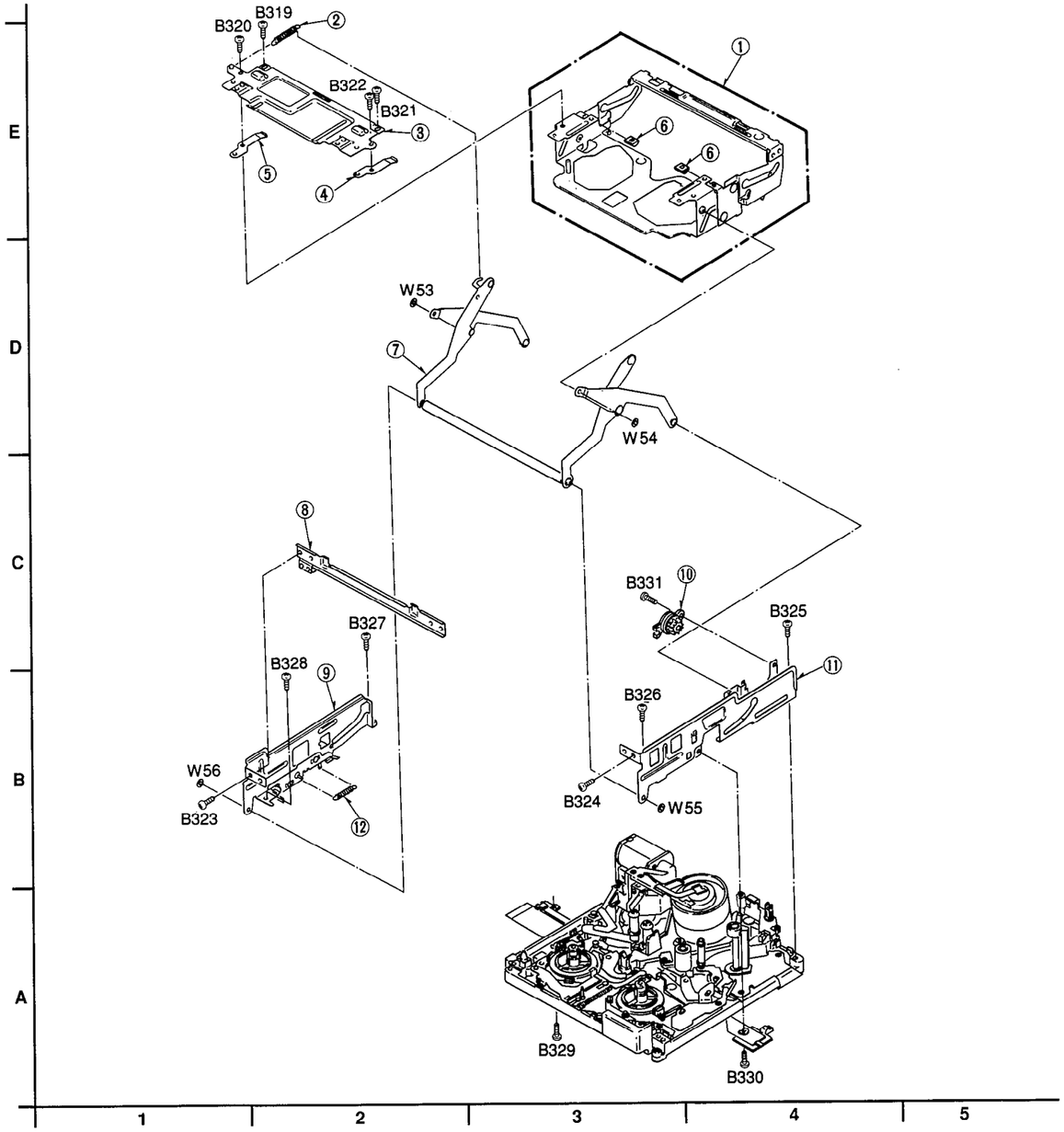
Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

3. CAMERA LENS SECTION

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
301	VDL0727	CRYSTAL FILTER	1	
302	VEK8179	CCD U.	1	
302-*	VJB22265	CCD FLEX. CARD	1	
303	VMX2702	CCD CUSHION	1	
304	VXW0354	LENS U.	1	
304-1	VDW0478	MASTER FLANGE	1	
304-2	VEK8090	LENS FLES. CARD	1	
304-3	VEM0821	ZOOM MOTOR U.	1	
304-4	VMA9883	SIDE YOKE	2	
304-5	VMS6182	GUIDE POLE	2	
304-8	VXA5916	A YOKE U.	1	
304-7	VXA5917	B YOKE U.	1	
304-8	VXL2738	IRIS U.	1	
304-9	VXL2775	2ND RACK A U.	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
304-10	VXP1809	2ND MOVING FRAME U.	1	
304-11	VXP1810	4TH MOVING FRAME U.	1	
304-12	VXQ0644	MAIN FRAME U.	1	
304-13	VXQ0645	3RD MOVING FRAME U.	1	
B301	XQN16+CJ8	SCREW	3	
B302	XQN16+CJ5	SCREW	6	
B303	XQN16+CJ5FZ	SCREW	1	
B304	XQN16+CJ6	SCREW	2	

❹ CASSETTE HOLDER SECTION

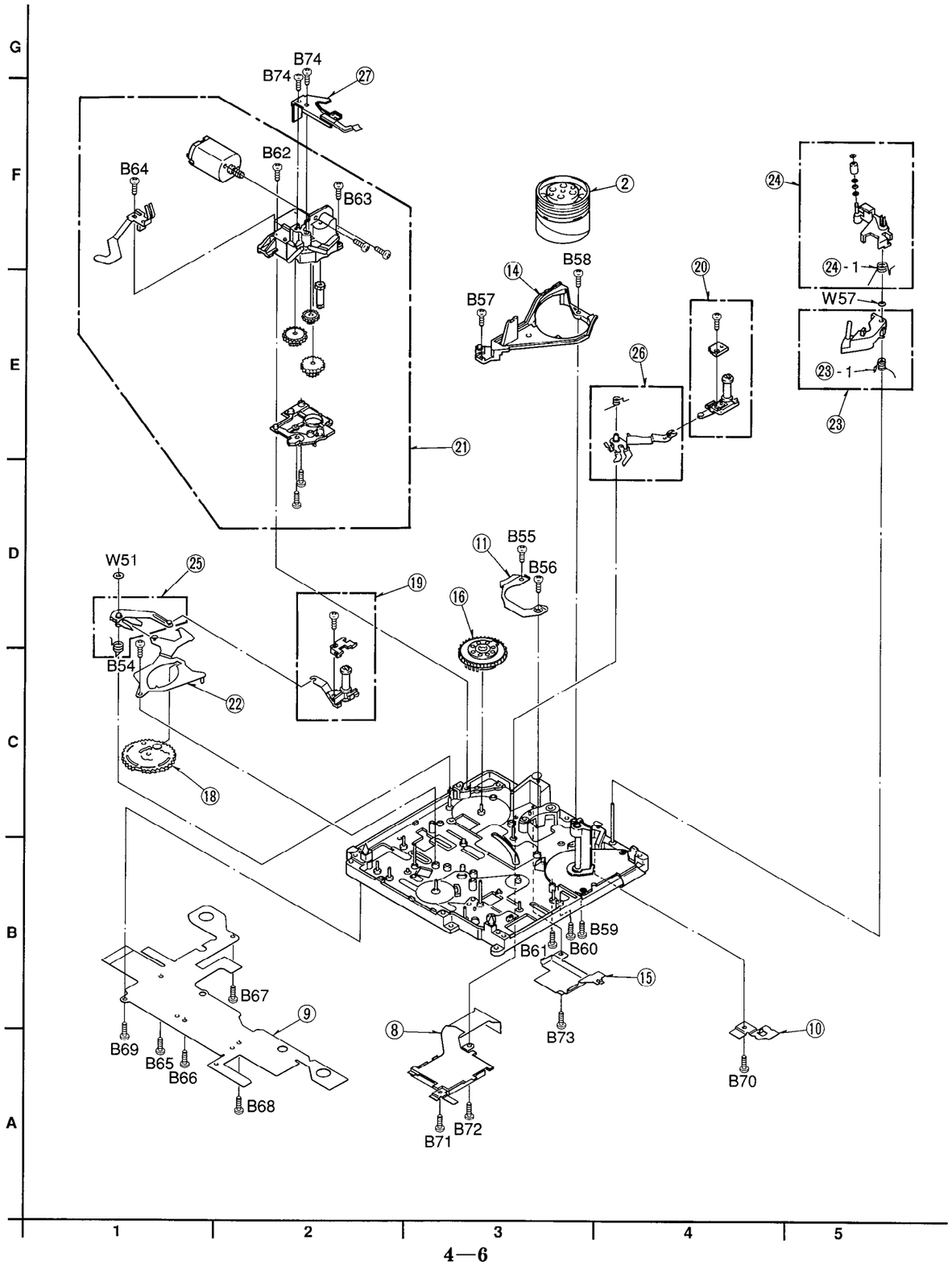


4. CASSETTE HOLDER SECTION

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXA5419	CASSETTE HOLDER	1	
2	VMB2780	CASSETTE UP SPRING	1	
3	VMA9187	TOP PLATE	1	
4	VMD2371	CASSETTE SLIDE PIECE	2	
7	VXL2447	ARM UNIT	1	
8	VXA5403	STAND SUPPORT ANGLE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
9	VXA5399	STAND (L)	1	
10	VXP1549	DAMPER	1	
11	VXA5398	STAND (R)	1	
12	VMB2779	LOCK SPRING	1	

❺ VCR MECHANISM SECTION (1)



4—6

5. VCR MECHANISM SECTION (1)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
2	VEG1438	CYLINDER UNIT	1	
8-*	VSC4214	SHIELD CASE (UPPER)	1	
9	VES0711	FLEXIBLE CABLE	1	
10	VMA9176	CAPSTAN COVER	1	
11	VMA9179	RADON PLATE	1	
14	VMD2373	RAIL	1	
15	VSC4215	SHIELD CASE	1	
16	VSR0114	MODE SW	1	
18	VXA5407	CAM GEAR	1	
19	VXA5409	S BOAT UNIT	1	
20	VXA5410	T BOAR UNIT	1	
21	VXA5417	GEAR BOX	1	
22	VXA5612	RADON ARM UNIT	1	
23	VXL2461	T2 ARM UNIT	1	
23-1	VMB2789	T2 ARM SPRING	1	
24	VXL2468	CLEANING ARM UNIT	1	
24-1	VMB2791	CLEANING ARM SPRING	1	
25	VXL2470	S1 ARM UNIT	1	
26	VXL2471	T1 ARM UNIT	1	
27	VMA9753	STOPPER	1	
B1, B2	VHD0882	SCREW	2	
B3, B4	XQN14+B15	SCREW	2	
B5-B8	VHD0883	SCREW	4	
B9	VHD0882	SCREW	1	
B10-12	XQN14+B15	SCREW	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

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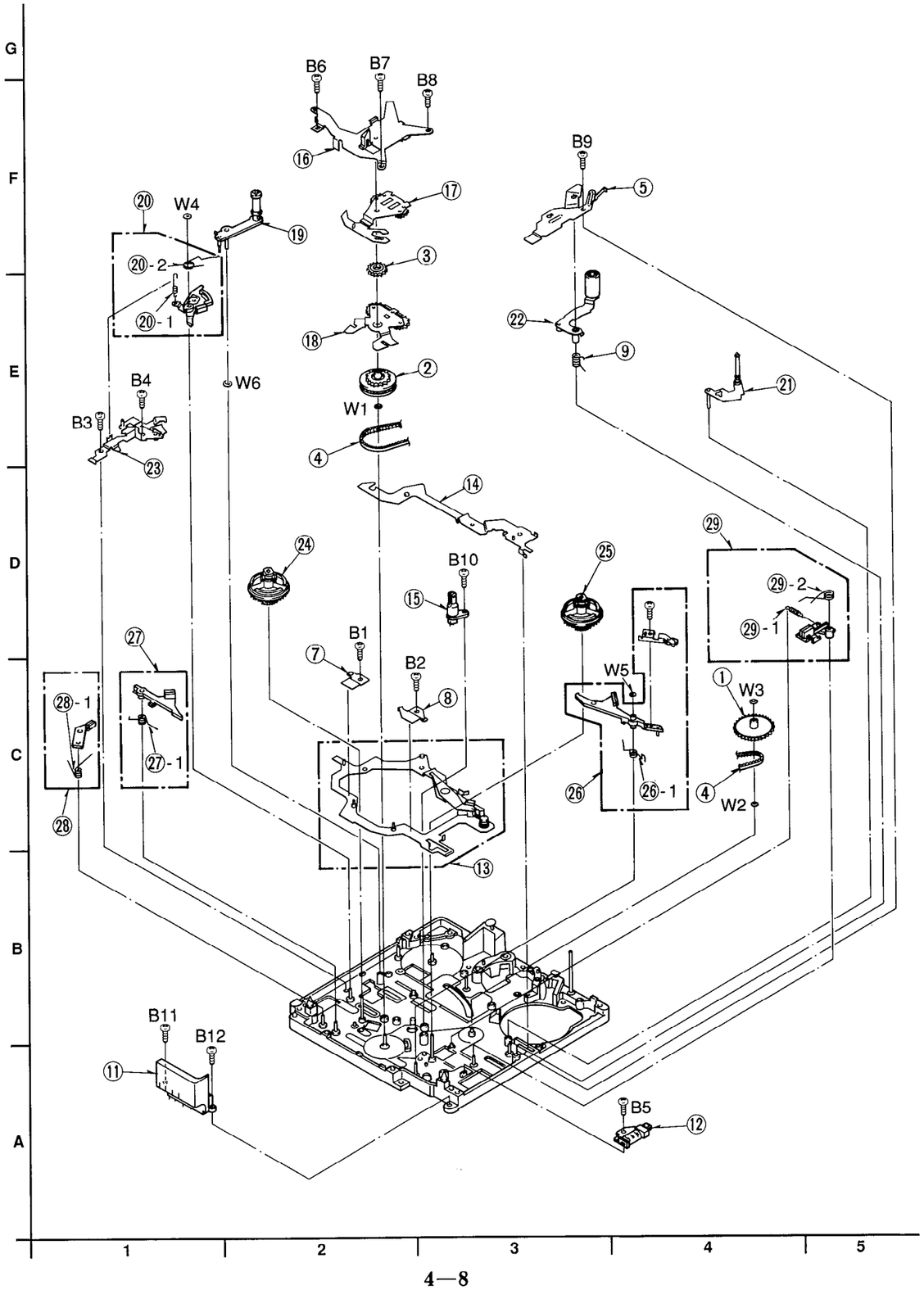
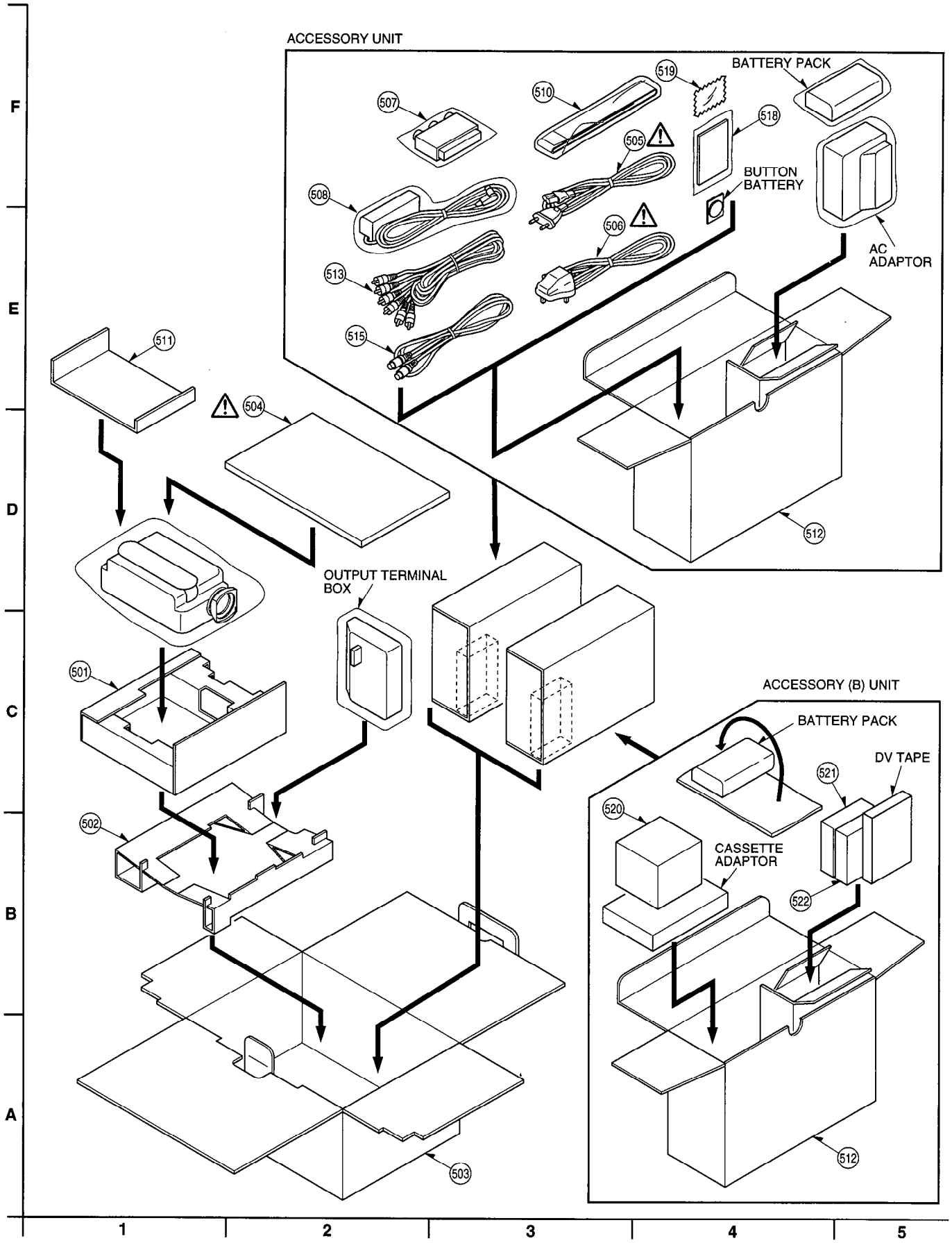
❻ VCR MECHANISM SECTION (2)



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VDG1030	DRIVE PULLEY	1	
2	VDG1031	CENTER PULLEY	1	
3	VEG1386KIT	CENTER GEAR	1	
4	VDV0265	TIMING BELT	1	
5	VMA9178	PINCH PRESSURE PLATE	1	
7	VMA9180	BRAKE ROD SUPPORT (S)	1	
8	VMA9181	BRAKE ROD SUPPORT (T)	1	
9	VMB2778	SPRING	1	
11	VSH0067	MIC SWITCH	1	
12	VSJ0114	SOLENOID	1	
13	VXA5401	BRAKE ROD	1	
14	VXA5408	T3 ROD	1	
15	VXA5411	LED HOLDER	1	
16	VXA5412	COVER PLATE	1	
17	VXL2454	P IDLER ARM	1	
18	VXL2455	FR IDLER ARM	1	
19	VXL2456	TENSION ARM	1	
20	VXL2732	PAD ARM	1	
20-1	VMB2788	PAD ARM SPRING (1)	1	
20-2	VMB2787	PAD ARM SPRING (2)	1	
21	VXL2462	T3 ARM	1	
22	VXL2464	PINCH ARM	1	
23	VXL2466	EJECT ARM	1	
24	VXR0347	SUPPLY REEL TABLE	1	
25	VXR0348	TAKE UP REEL TABLE	1	
26	VXZ0319	TAKEUP MAIN BRAKE	1	
26-1	VMB2782	T MAIN BRAKE SPRING	1	
27	VXZ0321	SUPPLY MAIN BRAKE	1	
27-1	VMB2783	S MAIN BRAKE SPRING	1	
28	VXZ0322	FF BRAKE	1	
28-1	VMB2784	FF BRAKE SPRING	1	
29	VXZ0323	REV BRAKE	1	
29-1	VMB2786	REV BRAKE SPRING (1)	1	
29-2	VMB2785	REV BRAKE SPRING (2)	1	
B51	XQN14+B4FZ	SCREW	1	
B52, 53	VHD0882	SCREW	2	
B54	VHD0878	SCREW	1	
B55, 56	VHD0989	SCREW	2	
B57, 58	XQN14+B4	SCREW	2	
B59-61	VXQ0439	SCREW	3	
B62, 63	XQN14+B35	SCREW	2	
B64	XQN14+B04	SCREW	1	
B65-73	XQN14+B15	SCREW	9	
B80-83	VHD0882	SCREW	4	
B84, 85	XQN14+B2	SCREW	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
501	VPN4765	CUSHION (UPPER)	1	
502	VPN4737	CUSHION (LOWER)	1	
503	VPG9194	PACKING	1	
⚠ 504	VQT7201	OPERATING INSTRUCTIONS	1	GERMAN, ENGLISH,
				FRENCH, SPAHISH
⚠ 504	VQT7202	OPERATING INSTRUCTIONS	1	ITALIAN
⚠ 505	VJA0998	AC CORD	1	
⚠ 505	VJA0940	AC CORD	1	
507	VFA0151	AV ADAPTOR (IN)	1	
508	VEK8228	DC CABLE U.	1	
510	VFC2494	SHOULDER BELT	1	
511	VPN4724	PAD	1	
512	VPN4765	ACCESSORIES PACKING	1	
513	VJA0788	AV OUTPUT CABLE	1	
515	VJA0658	S-VHS CABLE	1	
518	VEQ1996	REMOTE CONTROLLER	1	
521	VYQ1509	MC PROTECTOR	1	
522	VYQ1510	ND FILTER	1	
520	VYQ1479	WIDE CONVERSION LENS	1	

❼ PACKING PARTS & ACCESSORIES SECTION



4-2. ELECTRICAL REPLACEMENT PARTS LIST

VEP03E26C

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP03E26C	VTR MAIN P.C.BOARD	1	(RTL)
■	VEP23450A	CAMERA P.C.BOARD	1	(RTL)
■	VEP01801A	POWER P.C.BOARD	1	(RTL)
■	VEP02561A	DRIVE P.C.BOARD	1	(RTL)
■	VEP00Y65A	LCD/IF P.C.BOARD	1	(RTL)
■	VYK7917	TOP OPERATION P.C.BOARD	1	(RTL)
■	VEP28240C	E.V.F. (A) P.C.BOARD	1	(RTL)
■	VEP28244A	E.V.F. (B) P.C.BOARD	1	(RTL)
■	VEP04674B	FRONT P.C.BOARD	1	(RTL)
■	VEP06C16A	REAR OPERATION P.C.BOARD	1	(RTL)
■	VEP05352A	HEAD AMP PC.BOARD	1	(RTL)
■	VEP22265A	CCD FLEX. CARD P.C.BOARD	1	(RTL)
■	VEP03E26C	VTR MAIN P.C.BOARD	1	(RTL)
C601	ECST0JX476Z	T.CAPACITOR CH6.3V 47U	1	
C602	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C603-10	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	8	
C611-13	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C614	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C615	ECUX1H181JCQ	C.CAPACITOR CH 50V 180P	1	
C616	ECUX1H680JCQ	C.CAPACITOR CH 50V 68P	1	
C617-19	ECUX1H560JCQ	CAPACITOR 50V 56P	3	
C620-26	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	7	
C630-32	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	3	
C665	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C666	ECUX1C106VBP	C.CAPACITOR CH 16V 10U	1	
C668	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C669	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C671	VCS0JJ106	E.CAPACITOR 6.3V 10M	1	
C673,74	ECUM1C474KBN	C.CAPACITOR CH 16V 0.47U	2	
C675	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C676	ECUX1E222KBQ	C.CAPACITOR CH 25V 2200P	1	
C677	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C678	ECUX1H101JCQ	C.CAPACITOR CH 50V 100P	1	
C679	ECST0JX476Z	T.CAPACITOR CH6.3V 47U	1	
C2001,02	ECUX1H100CCQ	C.CAPACITOR CH 50V 10P	2	
C2003-05	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	3	
C2006	ECUX1H120JCQ	C.CAPACITOR CH 50V 12P	1	
C2007	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C2008	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2009	VCS0JJ106	E.CAPACITOR 6.3V 10M	1	
C2010	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C2011	VCS0JJ106	E.CAPACITOR 6.3V 10M	1	
C2012	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	1	
C2013	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	1	
C2014	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C2015	VCS0JJ106	E.CAPACITOR 6.3V 10M	1	
C2016	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2017	VCS0JJ106	E.CAPACITOR 6.3V 10M	1	
C2018	ECST0JY475Z	T.CAPACITOR CH6.3V 4.7U	1	
C2019	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2020	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C2021	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2022	VCS0JJ106	E.CAPACITOR 6.3V 10M	1	
C2023-25	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	3	
C2026	VCS0JJ106	E.CAPACITOR 6.3V 10M	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C2027	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	1	
C2028	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C2029	VCS0JJ106	E.CAPACITOR 6.3V 10M	1	
C2030	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C2031,32	ECUX1H221JCQ	C.CAPACITOR CH 50V 220P	2	
C2033	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2034	ECST1CY225Z	T.CAPACITOR CH 16V 2.2U	1	
C2035,36	ECUX1H100CCQ	C.CAPACITOR CH 50V 10P	2	
C2037	ECUX1H330JCQ	C.CAPACITOR CH 50V 33P	1	
C2038	ECUM1H150JCQ	C.CAPACITOR CH 50V 15P	1	
C2040	ECUX1H120JCQ	C.CAPACITOR CH 50V 12P	1	
C2041	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C2042	ECUX1C106VBP	C.CAPACITOR CH 16V 10U	1	
C2199	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3002	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C3003	ECUM1H150JCQ	C.CAPACITOR CH 50V 15P	1	
C3004	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3005-09	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	5	
C3010-13	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	4	
C3015	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3018	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3020	ECUX1H100CCQ	C.CAPACITOR CH 50V 10P	1	
C3021	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3022	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3023	ECST0GY226Z	T.CAPACITOR CH 4V 22U	1	
C3024	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3026	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C3027	ECUX1H050CCQ	C.CAPACITOR CH 50V 5P	1	
C3028	ECUX1E561KBQ	C.CAPACITOR CH 25V 560P	1	
C3030	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3035	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3036	ECUX1H100CCQ	C.CAPACITOR CH 50V 10P	1	
C3037	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3038,39	ECUX1H101JCQ	C.CAPACITOR CH 50V 100P	2	
C3040,41	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	2	
C3042	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3043-48	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	6	
C3050,51	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	2	
C3053,54	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	2	
C3055-58	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	4	
C3060	ECUM1H150JCQ	C.CAPACITOR CH 50V 15P	1	
C3061	ECUX1H120JCQ	C.CAPACITOR CH 50V 12P	1	
C3065	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	1	
C3066	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3067	ECST0JX226Z	T.CAPACITOR CH6.3V 22U	1	
C3071,72	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	2	
C3073-77	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	5	
C3078,79	ECUX1H050CCQ	C.CAPACITOR CH 50V 5P	2	
C3080	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3081	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3083,84	ECST0JX226Z	T.CAPACITOR CH6.3V 22U	2	
C3086	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	1	
C3088	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3089	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C3090	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C3091	ECST0JX226Z	T.CAPACITOR CH6.3V 22U	1	
C3092	ECUX1A105ZFV	C.CAPACITOR CH 10V 1U	1	
C3094	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3096	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3201,02	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	2	
C3203,04	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	2	
C3205	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C3206,07	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	2	
C3208	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3209-11	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	3	
C3212,13	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	2	
C3214	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	1	
C3215	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C3216-18	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	3	
C3219	ECUX1E273KBV	C.CAPACITOR CH 25V 0.027U	1	
C3220-22	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	3	
C3223	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3224	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C3225-27	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	3	
C3228	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3229	ECUX1E331KBQ	C. CAPACITOR CH 25V 330P	1	
C3230	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C3231	ECUX1E152KBQ	C. CAPACITOR CH 25V 1500P	1	
C3232-34	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	3	
C3235	ECUX1E681KBQ	C. CAPACITOR CH 25V 680P	1	
C3236-38	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	3	
C3239	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C3240	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C3241, 42	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	2	
C3243-45	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	3	
C3246	ECUX0J225KBN	C. CAPACITOR CH6.3V 2.2U	1	
C3247-52	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	6	
C3253	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C3254, 55	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	2	
C3256	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C3257	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C3258	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
C3259	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C3261	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C3262	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C3264	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C3802-04	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	3	
C3806	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3807	ECUX1A105ZFV	C. CAPACITOR CH 10V 1U	1	
C3808	ECUX1E271KBQ	C. CAPACITOR CH 25V 270P	1	
C3809	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3813	ECUX1A104KBQ	C. CAPACITOR CH 10V 0.1U	1	
C3814	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3816	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3817, 18	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	2	
C3820	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C3822	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C3824-26	EEJK0JS106	E. CAPACITOR 6.3V 10M	3	
C3827	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C3901	ECST0JC107Z	T. CAPACITOR CH6.3V 100U	1	
C3902	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C4001	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C4002	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C4003, 04	VCS0JJ106	E. CAPACITOR 6.3V 10M	2	
C4005, 06	ECUX1E152KBQ	C. CAPACITOR CH 25V 1500P	2	
C4007	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	1	
C4011	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C4012	VCS0JJ106	E. CAPACITOR 6.3V 10M	1	
C4013, 14	ECUX1H121JCQ	C. CAPACITOR CH 50V 120P	2	
C4015, 16	VCS0JJ106	E. CAPACITOR 6.3V 10M	2	
C4501	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C4502	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C4503-05	VCS0JJ106	E. CAPACITOR 6.3V 10M	3	
C4506	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C4507	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C4508	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C4509, 10	VCS0JJ106	E. CAPACITOR 6.3V 10M	2	
C4511	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C4512	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C4513, 14	VCS0JJ106	E. CAPACITOR 6.3V 10M	2	
C4515	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C4701	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C4702	VCS0JJ106	E. CAPACITOR 6.3V 10M	1	
C4704	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C4705	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C4706	ECUX1H153KBV	C. CAPACITOR CH 50V 0.015U	1	
C4798, 99	ECUX1H153KBV	C. CAPACITOR CH 50V 0.015U	2	
C6501	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C6502, 03	ECUX1C106VBP	C. CAPACITOR CH 16V 10U	2	
C6504	ECEV1CA101U	E. CAPACITOR CH 16V 100U	1	
D2001-04	MA728	DIODE	4	
D2005	1SS355	DIODE	1	
D2006	MA133	DIODE	1	
D2007	1SS355	DIODE	1	
D2010	MA728	DIODE	1	
D2011	MA132WK	DIODE	1	
D2012	MA132WA	DIODE	1	
D2013	MA728	DIODE	1	
D2015-18	MA728	DIODE	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D2020-22	MA728	DIODE	3	
D2023	1SS355	DIODE	1	
D2024, 25	MA728	DIODE	2	
D3201	MA132WA	DIODE	1	
D3202	MA728	DIODE	1	
D4001	MA133	DIODE	1	
D4002	MA728	DIODE	1	
D6501-04	MA132WA	DIODE	4	
D6505	MA132A	DIODE	1	
D6506	MA132WA	DIODE	1	
FP3201	VJS3320B024	CONNECTOR (FEMALE)	1	
FP4001	VJS3319B013	CONNECTOR (FEMALE)	1	
FP6001	VJS3319B014	CONNECTOR (FEMALE)	1	
FP6002	VJS3319B016	CONNECTOR (FEMALE)	1	
IC602	IR3Y35M	IC	1	
IC603	NJM78L12UA	IC	1	
IC604	BU4053BCFV	IC	1	
IC605	PQ20VZ1U	IC	1	
IC606	XC62AP2802M	IC	1	
IC609	BA7071F	IC	1	
IC610	TC7S14F	IC	1	
IC611	TC7ST04FU	IC	1	
IC613, 14	TC7S14F	IC	2	
IC2001	M31020MA108	IC	1	
IC2002	S3511AEFS	IC	1	
IC2003	UPD6462GS626	IC	1	
IC2004	S81333HGKF	IC	1	
IC2005	S29L330AFS	IC	1	
IC2006	M62370GP	IC	1	
IC2007	TA75W393FU	IC	1	
IC2008	TA75S393F	IC	1	
IC2009	S81238SG08	IC	1	
IC2010	XC61AN2901M	IC	1	
IC2011	D784037GK508	IC	1	
IC2012	TC4W53FU	IC	1	
IC2013	MM1320ENRE	IC	1	
IC2014, 15	TC4W53FU	IC	2	
IC3001	T9P90EF	IC	1	
IC3002	MN47V07AF	IC	1	
IC3003	MN67373	IC	1	
IC3005	BH7086KV	IC	1	
IC3006	NJM2538VT	IC	1	
IC3007	LZ9FC144	IC	1	
IC3201	M65500FP	IC	1	
IC3202	MNV4260	IC	1	
IC3203	AN3741FAP	IC	1	
IC3204	AD9057BRS	IC	1	
IC3205	TC7SH08FU	IC	1	
IC3801	TSB13LV01AGB	IC	1	
IC4001	NJM3414AVT	IC	1	
IC4501	AK4513-VQ	IC	1	
IC4701	M9802-206GAK	IC	1	
IC6501-03	TC7W241FU	IC	3	
IC6505, 06	TC7SH08FU	IC	2	
JK3801	VJJ0568	DV JACK	1	
L601, 02	VLQ0807K100	COIL 10UH	2	
L606, 07	VLQ0807K220	COIL 22UH	2	
L2001	VLQ0807K100	COIL 10UH	1	
L2002	VLQ0426J330	COIL 33UH	1	
L2003	VLQ0807K100	COIL 10UH	1	
L3002	VLQ0426J5R6	COIL 5.6UH	1	
L3003, 04	VLQ0807K100	COIL 10UH	2	
L3005	VLQ0807K220	COIL 22UH	1	
L3006	VLQ0807K100	COIL 10UH	1	
L3008	VLQ0807K100	COIL 10UH	1	
L3009	VLQ0426J100	COIL 10UH	1	
L3010, 11	VLQ0807K100	COIL 10UH	2	
L3201	VLQ0807K100	COIL 10UH	1	
L3202	VLQ0807M4R7	COIL 4.7UH	1	
L3203-07	VLQ0807K100	COIL 10UH	5	
L3208	VLQ0807K220	COIL 22UH	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L3209	VLQ0807M4R7	COIL 4.7UH	1	
L3801-03	VLQ0807K100	COIL 10UH	3	
L3901	VLQ0807K220	COIL 22UH	1	
L4001	VLQ0807K100	COIL 10UH	1	
L4502	VLQ0807K100	COIL 10UH	1	
L6501	VLQ0807K100	COIL 10UH	1	
L6502	VLQ0807K220	COIL 22UH	1	
LB3001-03	VLP0145	COIL	3	
LB3004	VLP0155	COIL	1	
LB3005, 06	VLP0329A601	COIL 600UH	2	
LB3007	VLP0329A241	COIL 240UH	1	
PP2001	VJP3989A050	CONNECTOR (MALE)	1	
PP3001	VJP3884B080	CONNECTOR (MALE)	1	
PP3002	VJP3989A070	CONNECTOR (MALE)	1	
PS1001	VJS3846A080	CONNECTOR (FEMALE)	1	
PS3001	VJS3846A030	CONNECTOR (FEMALE)	1	
PS3002	VJS3846A080	CONNECTOR (FEMALE)	1	
Q601, 02	2SB970X	TRANSISTOR	2	
Q607	2SB1462	TRANSISTOR	1	
Q608	2SB970X	TRANSISTOR	1	
Q610	2SD2216	TRANSISTOR	1	
Q2001	2SB970X	TRANSISTOR	1	
Q2002	2SB1218	TRANSISTOR	1	
Q2003	2SD1820	TRANSISTOR	1	
Q2006	2SD2216	TRANSISTOR	1	
Q2008	XP6501	TRANSISTOR-RESISTOR	1	
Q3001, 02	2SD2216	TRANSISTOR	2	
Q3201	2SD2216	TRANSISTOR	1	
Q3202	2SB1462	TRANSISTOR	1	
Q3203	2SC4627	TRANSISTOR	1	
Q3204	2SD2216	TRANSISTOR	1	
Q4001	XN4504	TRANSISTOR-RESISTOR	1	
Q4701	2SD1979	TRANSISTOR	1	
Q4702	XP4401	TRANSISTOR-RESISTOR	1	
Q6501	2SB1073	TRANSISTOR	1	
QR601	MRN1103	TRANSISTOR	1	
QR604	MRN1103	TRANSISTOR	1	
QR2001	MRN2111	TRANSISTOR	1	
QR2002, 03	XP4213	TRANSISTOR-RESISTOR	2	
QR2004	MRN2111	TRANSISTOR	1	
QR2005	UN2130	TRANSISTOR-RESISTOR	1	
QR2006	MRN2111	TRANSISTOR	1	
QR2007	MRN1104	TRANSISTOR	1	
QR2008	XP1213	TRANSISTOR-RESISTOR	1	
QR2009, 10	MRN2111	TRANSISTOR	2	
QR2011	MRN1104	TRANSISTOR	1	
QR2012, 13	MRN1103	TRANSISTOR	2	
QR3001	MRN1103	TRANSISTOR	1	
QR4001	MRN1103	TRANSISTOR	1	
QR4002	MRN2103	TRANSISTOR	1	
QR4703	XP4312	TRANSISTOR-RESISTOR	1	
R514	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R515	ERJ2RHD273	M. RESISTOR CH 2W 27K	1	
R516	ERJ2RHD104	M. RESISTOR CH 2W 100K	1	
R517	ERJ2GEJ224	M. RESISTOR CH 2W 220K	1	
R518	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R519	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R520	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R525	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R526	ERJ2GEJ153	M. RESISTOR CH 2W 15K	1	
R529, 30	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R601	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R602, 03	ERJ2RHD102	M. RESISTOR CH 2W 1K	2	
R604	ERJ2RHD272	M. RESISTOR CH 2W 2.7K	1	
R605	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R606	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R607	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R608	ERJ2GEJ273	M. RESISTOR CH 2W 27K	1	
R609	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R614, 15	ERJ2GEJ102	M. RESISTOR CH 2W 1K	2	
R616	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R617	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R619	ERJ2GEJ332	M. RESISTOR CH 2W 3.3K	1	
R621	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R622	ERJ2GEJ332	M. RESISTOR CH 2W 3.3K	1	
R623	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R624	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R625	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R626	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R629	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R631	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R634	ERJ2GEJ183	M. RESISTOR CH 2W 18K	1	
R635-37	ERJ2GEJ223	M. RESISTOR CH 2W 22K	3	
R639	ERJ2GEJ333	M. RESISTOR CH 2W 33K	1	
R640	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R642	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R644-46	ERJ2GEJ223	M. RESISTOR CH 2W 22K	3	
R647	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R648-50	ERJ2GEJ101	M. RESISTOR CH 2W 100	3	
R651, 52	ERJ2GEJ683	M. RESISTOR CH 2W 68K	2	
R653	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R656-58	ERJ2GEJ102	M. RESISTOR CH 2W 1K	3	
R697-99	ERJ2GEJ102	M. RESISTOR CH 2W 1K	3	
R2002	ERJ2GEJ105	M. RESISTOR CH 2W 1M	1	
R2003	ERJ2GEJ220	M. RESISTOR CH 2W 200	1	
R2004, 05	ERJ2GEJ102	M. RESISTOR CH 2W 1K	2	
R2006, 07	ERJ2GEJ103	M. RESISTOR CH 2W 10K	2	
R2008	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R2009	ERJ2GEJ394	M. RESISTOR CH 2W 390K	1	
R2011	ERJ2GEJ563	M. RESISTOR CH 2W 56K	1	
R2012	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R2013	ERJ2GEJ684	M. RESISTOR CH 2W 680K	1	
R2014	ERJ2GEJ474	M. RESISTOR CH 2W 470K	1	
R2015	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2016	ERJ2GEJ563	M. RESISTOR CH 2W 56K	1	
R2017, 18	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R2019, 20	ERJ2GEJ104	M. RESISTOR CH 2W 100K	2	
R2021	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R2022	ERJ2GEJ332	M. RESISTOR CH 2W 3.3K	1	
R2023	ERJ2GEJ393	M. RESISTOR CH 2W 39K	1	
R2024	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R2025	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R2026	ERJ2GEJ101	M. RESISTOR CH 2W 100	1	
R2027	ERJ8GEYG330	M. RESISTOR CH 1/8W 33	1	
R2028	ERJ2GEJ681	M. RESISTOR CH 2W 680	1	
R2029	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2031	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R2033	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R2034	ERJ2GEJ123	M. RESISTOR CH 2W 12K	1	
R2035	ERJ2RHD183	M. RESISTOR CH 2W 18K	1	
R2036	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R2037	ERJ2RHD223	M. RESISTOR CH 2W 22K	1	
R2038	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R2039	ERJ2RHD333	M. RESISTOR CH 2W 33K	1	
R2040	ERJ2GEJ101	M. RESISTOR CH 2W 100	1	
R2041	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R2042	ERJ2GEJ101	M. RESISTOR CH 2W 100	1	
R2043, 44	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R2045	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R2046	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R2047	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R2048	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2049, 50	ERJ2GE0R00	M. RESISTOR CH 2W 0	2	
R2052	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R2053	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R2054	ERJ2GEJ822	M. RESISTOR CH 2W 8.2K	1	
R2055, 56	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R2057	ERJ2GEJ822	M. RESISTOR CH 2W 8.2K	1	
R2058	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R2059	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2060	ERJ2RHD273	M. RESISTOR CH 2W 27K	1	
R2061	ERJ2RHD103	M. RESISTOR CH 2W 10K	1	
R2062, 63	ERJ2RHD473	M. RESISTOR CH 2W 47K	2	
R2064	ERJ2RHD273	M. RESISTOR CH 2W 27K	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R2065	ERJ2RHD103	M. RESISTOR CH 2W 10K	1	
R2066	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2067, 68	ERJ2GEJ101	M. RESISTOR CH 2W 100	2	
R2069	ERJ2GEJ105	M. RESISTOR CH 2W 1M	1	
R2070	ERJ2GEJ273	M. RESISTOR CH 2W 27K	1	
R2072	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2073, 74	ERJ2GEJ103	M. RESISTOR CH 2W 10K	2	
R2076, 77	ERJ2GEJ272	M. RESISTOR CH 2W 2.7K	2	
R2078, 79	ERJ2GEJ103	M. RESISTOR CH 2W 10K	2	
R2080	ERJ2RHD563	M. RESISTOR CH 2W 56K	1	
R2081	ERJ2GEJ122	M. RESISTOR CH 2W 1.2K	1	
R2082	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R2083	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R2085	ERJ2GEJ122	M. RESISTOR CH 2W 1.2K	1	
R2087	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R2088	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2089	ERJ2GEJ122	M. RESISTOR CH 2W 1.2K	1	
R2090, 91	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R2092	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R2093	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R2095	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R2096	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R2097	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R2098-04	ERJ2GEJ473	M. RESISTOR CH 2W 47K	7	
R2106	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2107	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R2108	ERJ2GEJ101	M. RESISTOR CH 2W 100	1	
R2109	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2110	ERJ2GEJ101	M. RESISTOR CH 2W 100	1	
R2113	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R2114, 15	ERJ2GEJ101	M. RESISTOR CH 2W 100	2	
R2116	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R2117	ERJ2GEJ392	M. RESISTOR CH 2W 3.9K	1	
R2118	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R2119	ERJ2GEJ272	M. RESISTOR CH 2W 2.7K	1	
R2121	ERJ2GEJ333	M. RESISTOR CH 2W 33K	1	
R2122	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R2123	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R2124, 25	ERJ2GEJ223	M. RESISTOR CH 2W 22K	2	
R2126	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R2127	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2128	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R2129	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R2130	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R2133	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R2134	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R2135	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R2136-38	ERJ2GEJ273	M. RESISTOR CH 2W 27K	3	
R2139	ERJ2GEJ681	M. RESISTOR CH 2W 680	1	
R2140	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R2141, 42	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R2143	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R2199	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R3001, 02	ERJ2GE0R00	M. RESISTOR CH 2W 0	2	
R3004	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3005	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3006	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R3008	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3009	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3010	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3011, 12	ERJ2GEJ223	M. RESISTOR CH 2W 22K	2	
R3013	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3014	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3016	ERJ2GEJ101	M. RESISTOR CH 2W 100	1	
R3017-19	ERJ2GEJ103	M. RESISTOR CH 2W 10K	3	
R3020	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3022	ERJ2GEJ121	M. RESISTOR CH 2W 120	1	
R3023	ERJ2GEJ682	M. RESISTOR CH 2W 6.8K	1	
R3024	ERJ2GEJ332	M. RESISTOR CH 2W 3.3K	1	
R3027	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R3028	ERJ2GEJ183	M. RESISTOR CH 2W 18K	1	
R3030	ERJ2GEJ123	M. RESISTOR CH 2W 12K	1	
R3031	ERJ2GEJ153	M. RESISTOR CH 2W 15K	1	
R3032	ERJ2GEJ123	M. RESISTOR CH 2W 12K	1	
R3033	ERJ2GEJ153	M. RESISTOR CH 2W 15K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3034	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3035	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3036	ERJ2GEJ225	M. RESISTOR CH 2W 2.2M	1	
R3037	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3038, 39	ERJ2GEJ105	M. RESISTOR CH 2W 1M	2	
R3041	ERJ2GEJ151	M. RESISTOR CH 2W 150	1	
R3042	ERJ2GEJ105	M. RESISTOR CH 2W 1M	1	
R3044	ERJ2GEJ221	M. RESISTOR CH 2W 220	1	
R3046	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3048, 49	ERJ2GEJ221	M. RESISTOR CH 2W 220	2	
R3050, 51	ERJ2GEJ471	M. RESISTOR CH 2W 470	2	
R3052	ERJ2GEJ105	M. RESISTOR CH 2W 1M	1	
R3053	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3054	ERJ2GEJ105	M. RESISTOR CH 2W 1M	1	
R3055, 56	ERJ2GE0R00	M. RESISTOR CH 2W 0	2	
R3057	ERJ2GEJ224	M. RESISTOR CH 2W 220K	1	
R3058	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3059	ERJ2GEJ680	M. RESISTOR CH 2W 68	1	
R3060	ERJ2GEJ271	M. RESISTOR CH 2W 270	1	
R3061	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3075	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3076	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R3078	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R3079	ERJ2GEJ101	M. RESISTOR CH 2W 100	1	
R3083	ERJ2GEJ121	M. RESISTOR CH 2W 120	1	
R3085	ERJ2GEJ121	M. RESISTOR CH 2W 120	1	
R3089	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3090, 91	ERJ2GEJ392	M. RESISTOR CH 2W 3.9K	2	
R3094	ERJ2GEJ391	M. RESISTOR CH 2W 390	1	
R3203	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R3204	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3205	ERJ2RHD222	M. RESISTOR CH 2W 2.2M	1	
R3206, 07	ERJ2GEJ121	M. RESISTOR CH 2W 120	2	
R3208	ERJ2GEJ822	M. RESISTOR CH 2W 8.2K	1	
R3209	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R3210	ERJ2GEJ561	M. RESISTOR CH 2W 560	1	
R3211	ERJ2GEJ680	M. RESISTOR CH 2W 68	1	
R3212	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3213	ERJ2GEJ682	M. RESISTOR CH 2W 6.8K	1	
R3214	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3215	ERJ2GEJ392	M. RESISTOR CH 2W 3.9K	1	
R3217	ERJ2RHD181	M. RESISTOR CH 2W 180	1	
R3218	ERJ2RHD301	M. RESISTOR CH 2W 300	1	
R3219	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3220	ERJ2GEJ221	M. RESISTOR CH 2W 220	1	
R3221	ERJ2RHD222	M. RESISTOR CH 2W 2.2M	1	
R3222	ERJ2GEJ152	M. RESISTOR CH 2W 1.5K	1	
R3223	ERJ2GEJ124	M. RESISTOR CH 2W 120K	1	
R3224	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R3225	ERJ2GEJ101	M. RESISTOR CH 2W 100	1	
R3226	ERJ2GEJ391	M. RESISTOR CH 2W 390	1	
R3227, 28	ERJ2GEJ224	M. RESISTOR CH 2W 220K	2	
R3229	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3230	ERJ2GEJ121	M. RESISTOR CH 2W 120	1	
R3231	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3232	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3233	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R3234	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3235-37	ERJ2GEJ392	M. RESISTOR CH 2W 3.9K	3	
R3238	ERJ2GEJ564	M. RESISTOR CH 2W 560K	1	
R3239	ERJ2GEJ563	M. RESISTOR CH 2W 56K	1	
R3240	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R3241	ERJ2GEJ392	M. RESISTOR CH 2W 3.9K	1	
R3242	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R3243-45	ERJ2GEJ392	M. RESISTOR CH 2W 3.9K	3	
R3247	ERJ2GEJ152	M. RESISTOR CH 2W 1.5K	1	
R3248	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3249	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R3251	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R3252	ERJ2RHD391	M. RESISTOR CH 2W 390	1	
R3254	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3255	ERJ2GEJ683	M. RESISTOR CH 2W 68K	1	
R3801	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3803	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3804	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3805	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R3806	ERJ2GEJ394	M. RESISTOR CH 2W 390K	1	
R3807	ERJ2RHD272	M. RESISTOR CH 2W 2.7K	1	
R3809	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3811-14	ERJ2RKD560	M. RESISTOR CH 2W 56	4	
R3815	ERJ2RHD332	M. RESISTOR CH 2W 3.3K	1	
R3816	ERJ2GEJ391	M. RESISTOR CH 2W 390	1	
R3834	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R3841, 42	ERJ2GEJ103	M. RESISTOR CH 2W 10K	2	
R3844	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R3845	ERJ2GEJ270	M. RESISTOR CH 2W 27	1	
R4001, 02	ERJ2RHD273	M. RESISTOR CH 2W 27K	2	
R4003, 04	ERJ2RHD822	M. RESISTOR CH 2W 8.2K	2	
R4011, 12	ERJ2RHD103	M. RESISTOR CH 2W 10K	2	
R4013, 14	ERJ2RHD223	M. RESISTOR CH 2W 22K	2	
R4015, 16	ERJ2GEJ273	M. RESISTOR CH 2W 27K	2	
R4017, 18	ERJ2GEJ101	M. RESISTOR CH 2W 100	2	
R4021	ERJ2GEJ124	M. RESISTOR CH 2W 120K	1	
R4022	ERJ2GEJ681	M. RESISTOR CH 2W 680	1	
R4501	ERJ2GEJ100	M. RESISTOR CH 2W 10	1	
R4502, 03	ERJ2RHD471	M. RESISTOR CH 2W 470	2	
R4504	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R4506, 07	ERJ2GE0R00	M. RESISTOR CH 2W 0	2	
R4701	ERJ2GEJ154	M. RESISTOR CH 2W 150K	1	
R4702	ERJ2RHD223	M. RESISTOR CH 2W 22K	1	
R4704	ERJ2GEJ392	M. RESISTOR CH 2W 3.9K	1	
R4705	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R4707	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R4708	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R4709	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R4710	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R4711, 12	ERJ2GEJ182	M. RESISTOR CH 2W 1.8K	2	
R4798	ERJ2GEJ154	M. RESISTOR CH 2W 150K	1	
R4799	ERJ2GEJ563	M. RESISTOR CH 2W 56K	1	
R6501	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R6502	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R6503	ERJ8GEY0R00	M. RESISTOR CH 1/8W 0	1	
R6505, 06	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	2	
R6510	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R6515	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
RA2001	EXB28V102J	COMBI. R-R 1K	1	
RA2002	EXB24V102J	COMBI. R-R 1K	1	
RA2003	EXB28V473J	COMBI. R-R 47K	1	
RA2005-08	EXB28V103J	COMBI. R-R 10K	4	
RA2011	EXB24V102J	COMBI. R-R 1K	1	
RA2012	EXB28V473J	COMBI. R-R 47K	1	
RA2013	EXB24V331J	COMBI. R-R 330	1	
RA2014	EXB24V271J	COMBI. R-R 270	1	
RA2016	EXB24V102J	COMBI. R-R 1K	1	
RA2018	EXB24V332J	COMBI. R-R 3.3K	1	
RA2023	EXB28V102J	COMBI. R-R 1K	1	
RA2024	EXB24V472J	COMBI. R-R 4.7K	1	
RA3803-05	EXB24V103J	COMBI. R-R 10K	3	
RA3806, 07	EXB28V103J	COMBI. R-R 10K	2	
RA3808, 09	EXB24V103J	COMBI. R-R 10K	2	
RA4001	EXB24V562J	COMBI. R-R 5.6K	1	
W602	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
W606	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
W610	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
W2001, 02	ERJ2GE0R00	M. RESISTOR CH 2W 0	2	
W2004	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
X2001	VSX0847	CRYSTAL OSCILLATOR	1	
X2002	VSX0885	CRYSTAL OSCILLATOR	1	
X2003	VSX0872	CRYSTAL OSCILLATOR	1	
X3001	VSX0848	CRYSTAL OSCILLATOR	1	
X3003	VSX0846	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VWJ13C8045AA	FLAT CARD CABLE	1	
	VWJ16C8050AA	FLAT CARD CABLE	1	
	VGQ4644	BARRIER	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	■ VEP23450A	CAMERA P. C. BOARD	1	(RTL)
C101	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C102	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C201	ECUX1C106VBP	C. CAPACITOR CH 16V 10U	1	
C202	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C204	ECST1CD686Z	E. CAPACITOR CH 16V 68U	1	
C205, 06	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	2	
C207	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C208	ECUX1H070CCQ	C. CAPACITOR CH 50V 7P	1	
C209	ECUX1H060CCQ	C. CAPACITOR CH 50V 6P	1	
C210	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C211	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C212	ECUM1H150JCQ	C. CAPACITOR CH 50V 15P	1	
C213	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C214	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C216	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C217	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C218	ECUM1H150JCQ	C. CAPACITOR CH 50V 15P	1	
C219, 20	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	2	
C221	ECST0JC107Z	T. CAPACITOR CH6.3V 100U	1	
C223	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C225	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
C226	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C227	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C229	ECST1VX225Z	T. CAPACITOR CH 35V 2.2U	1	
C230	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C231	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C232	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C233	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C235	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C236	ECUX1H120JCQ	C. CAPACITOR CH 50V 12P	1	
C237	ECUX1H060CCQ	C. CAPACITOR CH 50V 6P	1	
C239	ECUX1A105ZFV	C. CAPACITOR CH 10V 1U	1	
C250	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C301	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C302	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C303-05	EEJK0JS106	E. CAPACITOR 6.3V 10M	3	
C307-09	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	3	
C310	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C311	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C312	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C313	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C314	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C315	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C316	ECUX1H270JCQ	C. CAPACITOR CH 50V 27P	1	
C317	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C318	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C319, 20	EEJK0JS106	E. CAPACITOR 6.3V 10M	2	
C321, 22	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	2	
C323	VCS0JJ106	E. CAPACITOR 6.3V 10M	1	
C324	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C325	VCS0JJ106	E. CAPACITOR 6.3V 10M	1	
C326	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C327	EEJK0JS106	E. CAPACITOR 6.3V 10M	1	
C328	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C329	VCS0JJ106	E. CAPACITOR 6.3V 10M	1	
C330	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C331	VCS0JJ106	E. CAPACITOR 6.3V 10M	1	
C332	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C333	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C334	ECUM1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C335	ECUX1H151JCQ	C. CAPACITOR CH 50V 150P	1	
C338	VCS0JJ106	E. CAPACITOR 6.3V 10M	1	
C339	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C452	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C453	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
C454	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C455	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C701	ECUX1E332KBQ	C. CAPACITOR CH 25V 3300P	1	
C702	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C703	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C704	ECUX1A105ZFV	C. CAPACITOR CH 10V 1U	1	
C705	ECUX1C103KBQ	C. CAPACITOR CH 16V 0.01U	1	
C706	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C707	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C708	ECUX1E392KBQ	C. CAPACITOR CH 25V 3900P	1	
C709	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C711	ECUX1C106VBP	C. CAPACITOR CH 16V 10U	1	
C712	ECUX1H390JCQ	C. CAPACITOR CH 50V 39P	1	
C713	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C714	ECUX1C822KBQ	C. CAPACITOR CH 16V 8200P	1	
C715	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.01U	1	
C716	ECUM1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C717	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C718	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C719	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C720	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C721	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C722	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C724	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C725	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
D204,05	1SS355	DIODE	2	
D301	MA728	DIODE	1	
D302	1SS355	DIODE	1	
D303-05	MA728	DIODE	3	
FL201	VLF1386	FILTER	1	
FL202	VLF1388	FILTER	1	
FP701	VJS3320B020	CONNECTOR (FEMALE)	1	
IC101	RN5RG46A	IC	1	
IC201	MN31121SA	IC	1	
IC202	MN5245	IC	1	
IC203	AN2108NFHQ	IC	1	
IC204	TC7SH04FU	IC	1	
IC205	TC7SHU04FU	IC	1	
IC207	TC7SH08FU	IC	1	
IC210	TC7SH08FU	IC	1	
IC301	F437002EGGB	IC	1	
IC302	D703002GC035	IC	1	
IC303	TDA8766	IC	1	
IC304	ZA4035W	IC	1	
IC305	MN155402M9P	IC	1	
IC306	TA75W01FU	IC	1	
IC308	AK6480AF	IC	1	
IC309	TC7SH08FU	IC	1	
IC313,14	TC7SH08FU	IC	2	
IC317	TC7SH08FU	IC	1	
IC319	TC7SH08FU	IC	1	
IC457	TA75S393F	IC	1	
IC702	TA8487F	IC	1	
IC703	TB6526F	IC	1	
IC704	NJM2115VAT	IC	1	
IC705	TA75W01FU	IC	1	
IC706,07	NJM2115VAT	IC	2	
L101	VLQ0807K100	COIL 10UH	1	
L201	VLQ0808J100	COIL 10UH	1	
L202	VLQ0807K100	COIL 10UH	1	
L204	VLQ0807K100	COIL 10UH	1	
L205	VLQ0808J1R5	COIL 1.5UH	1	
L208	VLQ0807K100	COIL 10UH	1	
L210	VLQ0807K100	COIL 10UH	1	
L211	VLQ0426J270	COIL 27UH	1	
L214	VLQ0779K100	COIL 10UH	1	
L301-03	VLQ0807K100	COIL 10UH	3	
L304	VLQ0808J6R8	COIL 6.8UH	1	
L305-15	VLQ0807K100	COIL 10UH	11	
L318,19	VLQ0807K100	COIL 10UH	2	
L701,02	VLQ0807K100	COIL 10UH	2	
L703	VLQ0779K470	COIL 47UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L704,05	VLQ0807K100	COIL 10UH	2	
LB201,02	VLP0329A601	COIL 600UH	2	
LB301,02	VLP0329A601	COIL 600UH	2	
LB303	VLP0154	COIL	1	
LB304	VLP0175	COIL	1	
LB305,06	VLP0329A601	COIL 600UH	2	
PP201	VJP3358C012	CONNECTOR (MALE)	1	
PP301	VJP3884B080	CONNECTOR (MALE)	1	
PP302	VJP3847B030	CONNECTOR (MALE)	1	
Q101	2SB1073	TRANSISTOR	1	
Q201	XP4601	TRANSISTOR-RESISTOR	1	
Q202	2SD2216	TRANSISTOR	1	
Q203	2SB1462	TRANSISTOR	1	
Q302	2SB970X	TRANSISTOR	1	
Q303	2SD2216	TRANSISTOR	1	
Q304	2SB970X	TRANSISTOR	1	
Q451	2SD1030	TRANSISTOR	1	
Q701-03	XN4404	TRANSISTOR-RESISTOR	3	
Q704	2SD601A	TRANSISTOR	1	
Q706	XP4501	TRANSISTOR-RESISTOR	1	
Q707	2SB1073	TRANSISTOR	1	
QR101	MRN1102	TRANSISTOR	1	
QR302	MRN1102	TRANSISTOR	1	
QR303	XP1211	TRANSISTOR-RESISTOR	1	
QR304	MRN1104	TRANSISTOR	1	
QR305,06	XP1211	TRANSISTOR-RESISTOR	2	
QR310	MRN1102	TRANSISTOR	1	
QR701	MRN1102	TRANSISTOR	1	
R101	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R102	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R103	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R201,02	ERJ2GEJ105	M. RESISTOR CH 2W 1M	2	
R203	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R204	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R206	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R207	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R208	ERJ2GEJ271	M. RESISTOR CH 2W 270	1	
R209	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R210	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R211	ERJ2GEJ151	M. RESISTOR CH 2W 150	1	
R213	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R214	ERJ2GEJ151	M. RESISTOR CH 2W 150	1	
R216	ERJ2GEJ471	M. RESISTOR CH 2W 470	1	
R217	ERJ2GEJ823	M. RESISTOR CH 2W 82K	1	
R218	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R221	ERJ2GEJ123	M. RESISTOR CH 2W 12K	1	
R222	ERJ2GEJ561	M. RESISTOR CH 2W 560	1	
R223	ERJ2GEJ121	M. RESISTOR CH 2W 120	1	
R224	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R225	ERJ2GEJ221	M. RESISTOR CH 2W 220	1	
R226	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R228	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R229	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R230	ERJ2GEJ152	M. RESISTOR CH 2W 1.5K	1	
R231	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R232	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R233	ERJ2GEJ561	M. RESISTOR CH 2W 560	1	
R237	ERJ2GEJ152	M. RESISTOR CH 2W 1.5K	1	
R238	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R239	ERJ2GEJ152	M. RESISTOR CH 2W 1.5K	1	
R241	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R243	ERJ2GEJ272	M. RESISTOR CH 2W 2.7K	1	
R244	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R248-50	ERJ2GE0R00	M. RESISTOR CH 2W 0	3	
R251,52	ERJ2GEJ681	M. RESISTOR CH 2W 680	2	
R301	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R302	ERJ6RBB152	M. RESISTOR CH 1/10W 1.5K	1	
R304	ERJ2GEJ152	M. RESISTOR CH 2W 1.5K	1	
R305,06	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R307	ERJ2GEJ183	M. RESISTOR CH 2W 18K	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R308	ERJ2GEJ823	M. RESISTOR CH 2W 82K	1	
R309	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R310	ERJ2GEJ100	M. RESISTOR CH 2W 10	1	
R311	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R312	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R313-15	ERJ2GEJ473	M. RESISTOR CH 2W 47K	3	
R316	ERJ2RHD183	M. RESISTOR CH 2W 18K	1	
R317	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R318	ERJ2GEJ393	M. RESISTOR CH 2W 39K	1	
R319	ERJ2RHD303	M. RESISTOR CH 2W 30K	1	
R320	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R321	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R322	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R323	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R324	ERJ2GEJ272	M. RESISTOR CH 2W 2.7K	1	
R325	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R326	ERJ2GEJ682	M. RESISTOR CH 2W 6.8K	1	
R327, 28	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R329, 30	ERJ2GEJ105	M. RESISTOR CH 2W 1M	2	
R331	ERJ2GEJ332	M. RESISTOR CH 2W 3.3K	1	
R332	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R333	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R334	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R335	ERJ2GEJ681	M. RESISTOR CH 2W 680	1	
R336	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R337	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R338	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R339	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R340	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R341	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R342	ERJ2GEJ821	M. RESISTOR CH 2W 820	1	
R343, 44	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R345	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R346	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R348	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R351	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R352	ERJ2GEJ152	M. RESISTOR CH 2W 1.5K	1	
R353	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R354-57	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	4	
R358	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R359	ERJ2GEJ332	M. RESISTOR CH 2W 3.3K	1	
R366	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R372	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R375	ERJ2GEJ182	M. RESISTOR CH 2W 1.8K	1	
R376	ERJ2GEJ822	M. RESISTOR CH 2W 8.2K	1	
R377	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R378	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R379	ERJ6RBB152	M. RESISTOR CH 1/10W 1.5K	1	
R380	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R381	ERJ6RBB152	M. RESISTOR CH 1/10W 1.5K	1	
R382	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R383	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R385	ERJ2GEJ105	M. RESISTOR CH 2W 1M	1	
R386	ERJ2GEJ391	M. RESISTOR CH 2W 390	1	
R387	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R393	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R451	ERJ3GEYJ335	M. RESISTOR CH 1/16W 3.3M	1	
R452	ERJ2GEJ563	M. RESISTOR CH 2W 56K	1	
R453	ERJ2RHD113	M. RESISTOR CH 2W 11K	1	
R454	ERJ2RHD183	M. RESISTOR CH 2W 18K	1	
R701, 02	ERJ3GEYJ3R3	M. RESISTOR CH 1/16W 3.3	2	
R703	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R704	ERJ2GEJ333	M. RESISTOR CH 2W 33K	1	
R705-07	ERJ2GEJ272	M. RESISTOR CH 2W 2.7K	3	
R708, 09	ERJ2GEJ473	M. RESISTOR CH 2W 47K	2	
R710	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R711	ERJ2GEJ153	M. RESISTOR CH 2W 15K	1	
R712	ERJ3RED124	M. RESISTOR CH 3W 120K	1	
R713, 14	ERJ2RHD472	M. RESISTOR CH 2W 4.7K	2	
R715	ERJ3RED124	M. RESISTOR CH 3W 120K	1	
R716	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R717, 18	ERJ6RBB472	M. RESISTOR CH 1/10W 4.7K	2	
R719, 20	ERJ2GEJ153	M. RESISTOR CH 2W 15K	2	
R721	ERJ2GEJ221	M. RESISTOR CH 2W 220	1	
R722	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R723	ERJ2GEJ223	M. RESISTOR CH 2W 22K	1	
R724	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R725	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R726	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R727	ERJ2GEJ471	M. RESISTOR CH 2W 470	1	
R728	ERJ2GEJ124	M. RESISTOR CH 2W 120K	1	
R729	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R730	ERJ2GEJ393	M. RESISTOR CH 2W 39K	1	
R731	ERJ2GEJ333	M. RESISTOR CH 2W 33K	1	
R732	ERJ2GEJ153	M. RESISTOR CH 2W 15K	1	
R733, 34	ERJ2GEJ684	M. RESISTOR CH 2W 680K	2	
R735, 36	ERJ2GEJ123	M. RESISTOR CH 2W 12K	2	
R737	ERJ2GEJ474	M. RESISTOR CH 2W 470K	1	
R738	ERJ2GEJ333	M. RESISTOR CH 2W 33K	1	
R740	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R741	ERJ2GEJ183	M. RESISTOR CH 2W 18K	1	
R742	ERJ2GEJ104	M. RESISTOR CH 2W 100K	1	
R743, 44	ERJ2RHD153	M. RESISTOR CH 2W 15K	2	
R745	ERJ2GEJ682	M. RESISTOR CH 2W 6.8K	1	
R746	ERJ6RQF1R8	M. RESISTOR CH 1/10W 1.8K	1	
R747	ERJ2GEJ221	M. RESISTOR CH 2W 220	1	
R748	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R749	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R750	ERJ2GEJ563	M. RESISTOR CH 2W 56K	1	
R751	ERJ2GEJ222	M. RESISTOR CH 2W 2.2K	1	
R752	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R753	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R754, 55	ERJ2GEJ103	M. RESISTOR CH 2W 10K	2	
R757	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R758	ERJ2GEJ562	M. RESISTOR CH 2W 5.6K	1	
R761	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R762	ERJ2GEJ682	M. RESISTOR CH 2W 6.8K	1	
RA302, 03	EXB24V473J	COMBI. R-R 47K	2	
RA304	EXBV8V101J	COMBI. R-R 100	1	
RA305	EXB24V473J	COMBI. R-R 47K	1	
RA306	EXBV8V101J	COMBI. R-R 100	1	
RA307	EXB24V101J	COMBI. R-R 100	1	
W201	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
W207, 08	ERJ2GE0R00	M. RESISTOR CH 2W 0	2	
W303	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
W305	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
W306, 07	ERJ2GE0R00	M. RESISTOR CH 2W 0	2	
W309	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
X201	VSX0895	CRYSTAL OSCILLATOR	1	
X301	VSX0869	CRYSTAL OSCILLATOR	1	
X302	VSX0865	CRYSTAL OSCILLATOR	1	
■	VEP01801A	POWER P. C. BOARD	1	(RTL)
C1001	ECUX1A335KBM	C. CAPACITOR CH 10V 3.3P	1	
C1002	ECGC1BB150	C. CAPACITOR 12V 15P	1	
C1003, 04	ECUX1C106VBP	C. CAPACITOR CH 16V 10U	2	
C1009	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C1011	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C1012	ECUX1A335KBM	C. CAPACITOR CH 10V 3.3P	1	
C1013	ECUX1E331KBQ	C. CAPACITOR CH 25V 330P	1	
C1014	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C1015	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
*C1016-19	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	4	
C1021	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C1022	ECUX1A335KBM	C. CAPACITOR CH 10V 3.3P	1	
C1023	ECUX1E331KBQ	C. CAPACITOR CH 25V 330P	1	
C1024	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C1025	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C1026-29	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	4	
C1031	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C1032	ECUX1A335KBM	C. CAPACITOR CH 10V 3.3P	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1033	ECUX1E392KBQ	C. CAPACITOR CH 25V 3900P	1	
C1034	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C1035	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C1036	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C1041	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C1042	ECUX1A335KBM	C. CAPACITOR CH 10V 3.3P	1	
C1044	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C1045	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C1046, 47	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	2	
C1051	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C1052	ECUX1E105KBM	C. CAPACITOR CH 25V 1U	1	
C1053	ECUX1E222KBQ	C. CAPACITOR CH 25V 2200P	1	
C1055	ECUX1C106VBP	C. CAPACITOR CH 16V 10U	1	
C1056	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C1057	ECUX1A105KBN	C. CAPACITOR CH 50V 1U	1	
C1058	ECUX1C106VBP	C. CAPACITOR CH 16V 10U	1	
C1059	ECUX1A335KBM	C. CAPACITOR CH 10V 3.3P	1	
C1061	ECUX1E152KBQ	C. CAPACITOR CH 25V 1500P	1	
C1062	ECUX1E332KBQ	C. CAPACITOR CH 25V 3300P	1	
C1063, 64	ECUM1A225KBM	C. CAPACITOR CH 10V 22U	2	
C1065, 66	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	2	
C1101	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C1102	ECUX1C334KBN	C. CAPACITOR CH 16V 0.33U	1	
C1103	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C1104	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C1105	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C1106	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C1107	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C1111	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	1	
C1112	ECUX1E471KBQ	C. CAPACITOR CH 25V 470P	1	
C1113	ECUX1H151JCQ	C. CAPACITOR CH 50V 150P	1	
C1114	ECUX1H390JCQ	C. CAPACITOR CH 50V 39P	1	
C1117	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C1118	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C1119	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C1121	ECUX1H822KBV	C. CAPACITOR CH 50V 8200P	1	
C1122	ECUX1C822KBQ	C. CAPACITOR CH 16V 8200P	1	
C1123	ECUX1H151JCQ	C. CAPACITOR CH 50V 150P	1	
C1124	ECUX1H390JCQ	C. CAPACITOR CH 50V 39P	1	
C1128, 29	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	2	
C1131	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	1	
C1132	ECUX1E222KBQ	C. CAPACITOR CH 25V 2200P	1	
C1133	ECUX1H151JCQ	C. CAPACITOR CH 50V 150P	1	
C1134	ECUX1H390JCQ	C. CAPACITOR CH 50V 39P	1	
C1141	ECUM1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C1142	ECUX1H822KBV	C. CAPACITOR CH 50V 8200P	1	
C1143	ECUX1H151JCQ	C. CAPACITOR CH 50V 150P	1	
C1144	ECUX1H390JCQ	C. CAPACITOR CH 50V 39P	1	
C1151	ECUX1H822KBV	C. CAPACITOR CH 50V 8200P	1	
C1152	ECUX1C822KBQ	C. CAPACITOR CH 16V 8200P	1	
C1153	ECUX1H151JCQ	C. CAPACITOR CH 50V 150P	1	
C1154	ECUX1H390JCQ	C. CAPACITOR CH 50V 39P	1	
C1155	ECST1AY225Z	T. CAPACITOR CH 10V 2.2U	1	
C1156	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C1251	ECUX1C106VBP	C. CAPACITOR CH 16V 10U	1	
D1051, 52	MA729	DIODE	2	
D1061, 62	MA728	DIODE	2	
D1101	MA8120-L	DIODE	1	
D1102	MA728	DIODE	1	
D1103	1SS355	DIODE	1	
D1151	MA8180-M	DIODE	1	
D1152	1SS355	DIODE	1	
FP1001	VJS3320B014	CONNECTOR (FEMALE)	1	
IC1001	BA9734AKV	IC	1	
IC1002	TA75S393F	IC	1	
⚠ IP1001	VSF0233F31	FUSE	1	
L1001	ELC5SB3R9M	COIL 3.9UH	1	
L1011	ELL6TR560M	COIL 56UH	1	
L1012	VLQ0810M4R7	COIL 4.7UH	1	
L1013	VLQ0779K100	COIL 10UH	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L1014	VLQ0780K100	COIL 10UH	1	
L1015-17	VLQ0779K100	COIL 10UH	3	
L1021	ELL6TR150M	COIL 15UH	1	
L1022	VLQ0810M4R7	COIL 4.7UH	1	
L1023	VLQ0779M4R7	COIL 4.7UH	1	
L1024	VLQ0779K100	COIL 10UH	1	
L1025	VLQ0780K100	COIL 10UH	1	
L1026	VLQ0779K100	COIL 10UH	1	
L1029	VLQ0779K100	COIL 10UH	1	
L1031	ELL6TR151M	COIL 150UH	1	
L1032	VLQ0810M4R7	COIL 4.7UH	1	
L1041	ELL6TR330M	COIL 33UH	1	
L1042	VLQ0810M4R7	COIL 4.7UH	1	
L1043	VLQ0780K100	COIL 10UH	1	
L1051, 52	VLQ0779K331	COIL 330UH	2	
L1054	VLQ0779K100	COIL 10UH	1	
L1061	ELL6TRD003	COIL 3UH	1	
L1062	ELL6TRD004	COIL 4UH	1	
PP1001	VJP3884B080	CONNECTOR (MALE)	1	
Q1011	FP102	TRANSISTOR	1	
Q1021	FP102	TRANSISTOR	1	
Q1022	2SK2151	TRANSISTOR	1	
Q1031	FP102	TRANSISTOR	1	
Q1041	FP102	TRANSISTOR	1	
Q1042	2SK2151	TRANSISTOR	1	
Q1051	2SA1731-R	TRANSISTOR	1	
Q1052	2SB970X	TRANSISTOR	1	
Q1053	2SD2218	TRANSISTOR	1	
Q1054	XP1401	TRANSISTOR-RESISTOR	1	
Q1055	2SD2216	TRANSISTOR	1	
Q1056	2SB1462-RS	TRANSISTOR	1	
Q1061, 62	FP102	TRANSISTOR	2	
Q1101	2SB1462	TRANSISTOR	1	
QR1001	UN2130	TRANSISTOR-RESISTOR	1	
QR1002	UN921F	TRANSISTOR-RESISTOR	1	
QR1003	MRN1104	TRANSISTOR	1	
QR1004	MRN2111	TRANSISTOR	1	
QR1055	MRN1104	TRANSISTOR	1	
QR1101	MRN1107	TRANSISTOR	1	
R1001	ERJ2GEJ472	M. RESISTOR CH 2W 4.7K	1	
R1003, 04	ERJ2GEJ225	M. RESISTOR CH 2W 2.2M	2	
R1005	ERJ2GEJ103	M. RESISTOR CH 2W 10K	1	
R1007	ERJ8GEY0R00	M. RESISTOR CH 1/8W 0	1	
R1008	ERJ2GEJ473	M. RESISTOR CH 2W 47K	1	
R1009	ERJ8GEY0R00	M. RESISTOR CH 1/8W 0	1	
R1010	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1011	ERJ6RBB682	M. RESISTOR CH 1/10W 6.8K	1	
R1012	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1013	ERJ3RBD361	M. RESISTOR CH 3W 360	1	
R1014	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R1015	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R1020	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1021	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R1022	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1023	ERJ3RBD331	M. RESISTOR CH 3W 330	1	
R1024	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R1025	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R1030	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1031	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R1032	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1033	ERJ3RED220	M. RESISTOR CH 3W 22	1	
R1034	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R1035	ERJ2GE0R00	M. RESISTOR CH 2W 0		
R1040	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1041	ERJ6RBB152	M. RESISTOR CH 1/10W 1.5K	1	
R1042	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1043	ERJ3RBD301	M. RESISTOR CH 3W 300	1	
R1044	ERJ6RBB272	M. RESISTOR CH 1/10W 2.7K	1	
R1045	ERJ2GEJ331	M. RESISTOR CH 2W 330	1	
R1050	ERJ3RED820	M. RESISTOR CH 3W 82	1	
R1051	ERJ6RBB273	M. RESISTOR CH 1/10W 27K	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1052	ERJ3RED820	M.RESISTOR CH 3W 82	1	
R1053	ERJ3RBD301	M.RESISTOR CH 3W 300	1	
R1054	ERJ6RBB272	M.RESISTOR CH 1/10W 2.7K	1	
R1056	ERJ2GEJ470	M.RESISTOR CH 2W 47	1	
R1057	ERJ2RHD133	M.RESISTOR CH 2W 13K	1	
R1058	ERJ2RHD121	M.RESISTOR CH 2W 120	1	
R1059	ERJ2RHD272	M.RESISTOR CH 2W 2.7K	1	
R1061,62	ERJ2GEJ122	M.RESISTOR CH 2W 1.2K	2	
R1081	ERJ2GEJ472	M.RESISTOR CH 2W 4.7K	1	
R1101	ERJ3RBD223	M.RESISTOR CH 3W 22K	1	
R1102	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R1103	ERJ2GEJ472	M.RESISTOR CH 2W 4.7K	1	
R1104	ERJ2GEJ123	M.RESISTOR CH 2W 12K	1	
R1105	ERJ2GEJ563	M.RESISTOR CH 2W 56K	1	
R1106	ERJ2GEJ273	M.RESISTOR CH 2W 27K	1	
R1107	ERJ2GEJ225	M.RESISTOR CH 2W 2.2M	1	
R1108	ERJ2GEJ473	M.RESISTOR CH 2W 47K	1	
R1109	ERJ2GEJ103	M.RESISTOR CH 2W 10K	1	
R1111	ERJ2GEJ151	M.RESISTOR CH 2W 150	1	
R1112	ERJ2GEJ822	M.RESISTOR CH 2W 8.2K	1	
R1121	ERJ2GEJ151	M.RESISTOR CH 2W 150	1	
R1122	ERJ2GEJ682	M.RESISTOR CH 2W 6.8K	1	
R1131	ERJ2GEJ151	M.RESISTOR CH 2W 150	1	
R1132	ERJ2GEJ682	M.RESISTOR CH 2W 6.8K	1	
R1136	ERJ2GE0R00	M.RESISTOR CH 2W 0	1	
R1141	ERJ2GEJ151	M.RESISTOR CH 2W 150	1	
R1142	ERJ2GEJ103	M.RESISTOR CH 2W 10K	1	
R1150	ERJ8GEYJ680	M.RESISTOR CH 1/8W 68	1	
R1151	ERJ2GEJ151	M.RESISTOR CH 2W 150	1	
R1152	ERJ2GEJ682	M.RESISTOR CH 2W 6.8K	1	
R1153	ERJ2RHD123	M.RESISTOR CH 2W 12K	1	
R1154	ERJ2RHD473	M.RESISTOR CH 2W 47K	1	
R1155	ERJ2GEJ103	M.RESISTOR CH 2W 10K	1	
R1156	ERJ2GEJ332	M.RESISTOR CH 2W 3.3K	1	
R1157	ERJ2GEJ272	M.RESISTOR CH 2W 2.7K	1	
R1158,59	ERJ2GEJ473	M.RESISTOR CH 2W 47K	2	
R1178,79	ERJ2GE0R00	M.RESISTOR CH 2W 0	2	
R1253-56	ERJ2GEJ473	M.RESISTOR CH 2W 47K	4	
T1001	VTP0499	TRANSFORMER	1	
■	VEP02561A	DRIVE P.C.BOARD	1	(RTL)
C2201	ECUX1E273KBV	C.CAPACITOR CH 25V 0.027U	1	
C2202	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2203	ECUX1H270JCQ	C.CAPACITOR CH 50V 27P	1	
C2204	ECUM1A564KBN	C.CAPACITOR CH 10V 0.56U	1	
C2205	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	1	
C2207	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2208	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2209	ECUX1E223KBV	C.CAPACITOR CH 25V 0.023U	1	
C2210	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	1	
C2211	ECST0JY475Z	T.CAPACITOR CH6.3V 4.7U	1	
C2212-14	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	3	
C2215	ECUX0J335KBN	C.CAPACITOR CH6.3V 3.3U	1	
C2217-19	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	3	
C2223	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C2225	ECUX0J335KBN	C.CAPACITOR CH6.3V 3.3U	1	
C2226,27	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	2	
C2230	ECUX0J335KBN	C.CAPACITOR CH6.3V 3.3U	1	
C2231	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	1	
C2232	ECUX0J335KBN	C.CAPACITOR CH6.3V 3.3U	1	
C2233	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2234	ECUX1H101JCQ	C.CAPACITOR CH 50V 100P	1	
C2235-37	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	3	
C2238,39	ECUX0J335KBN	C.CAPACITOR CH6.3V 3.3U	2	
C2240	ECUM1H150JCQ	C.CAPACITOR CH 50V 15P	1	
C2245	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	1	
C2246	ECUM1A564KBN	C.CAPACITOR CH 10V 0.56U	1	
C2247-49	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C2250	ECST0JX476Z	T.CAPACITOR CH6.3V 47U	1	
C2251	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C2255-57	ECUX1C104ZFQ	C.CAPACITOR CH 16V 0.01U	3	
FP2002	VJS3319B022	CONNECTOR (FEMALE)	1	
FP2003	VJS3319B009	CONNECTOR (FEMALE)	1	
FP2004	VJS3320B030	CONNECTOR (FEMALE)	1	
IC2201	TB6519AF	IC	1	
IC2202,03	MDC05	IC	2	
IC2204	TA75S393F	IC	1	
IC2205	TC75W54FU	IC	1	
IC2206	TC7S86FU	IC	1	
IC2207	BA6289F	IC	1	
PS2001	VJS3989A050	CONNECTOR (FEMALE)	1	
Q2201	2SB1462	TRANSISTOR	1	
Q2202	2SD2216	TRANSISTOR	1	
R2201	ERJ2GEJ682	M.RESISTOR CH 2W 6.8K	1	
R2202	ERJ2GEJ471	M.RESISTOR CH 2W 470	1	
R2204	ERJ2GEJ224	M.RESISTOR CH 2W 220K	1	
R2205	ERJ2GEJ102	M.RESISTOR CH 2W 1K	1	
R2207	ERJ2GEJ561	M.RESISTOR CH 2W 560	1	
R2208	ERJ8GEYJR33	M.RESISTOR CH 1/8W 0.33	1	
R2209	ERJ8GEYJR47	M.RESISTOR CH 1/8W 0.47	1	
R2210,11	ERJ2GEJ472	M.RESISTOR CH 2W 4.7K	2	
R2212	ERJ6RQJR27	M.RESISTOR CH 1/8W 0.27	1	
R2213	ERJ2GEJ471	M.RESISTOR CH 2W 470	1	
R2214	ERJ2GEJ102	M.RESISTOR CH 2W 1K	1	
R2215,16	ERJ2GEJ103	M.RESISTOR CH 2W 10K	2	
R2220	ERJ2RHD104	M.RESISTOR CH 2W 100K	1	
R2221	ERJ2RHD431	M.RESISTOR CH 2W 430	1	
R2222,23	ERJ2GEJ223	M.RESISTOR CH 2W 22K	2	
R2224	ERJ2GEJ182	M.RESISTOR CH 2W 1.8K	1	
R2225	ERJ2GEJ394	M.RESISTOR CH 2W 390K	1	
R2226	ERJ2GEJ103	M.RESISTOR CH 2W 10K	1	
R2227	ERJ2GEJ222	M.RESISTOR CH 2W 2.2K	1	
R2228	ERJ2GEJ105	M.RESISTOR CH 2W 1M	1	
R2229	ERJ2GEJ103	M.RESISTOR CH 2W 10K	1	
R2231	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R2232	ERJ2GEJ471	M.RESISTOR CH 2W 470	1	
R2233	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R2234	ERJ2GEJ394	M.RESISTOR CH 2W 390K	1	
R2235	ERJ2GEJ104	M.RESISTOR CH 2W 100K	1	
R2236	ERJ2GEJ273	M.RESISTOR CH 2W 27K	1	
R2237	ERJ2GEJ222	M.RESISTOR CH 2W 2.2K	1	
R2238	ERJ2GEJ122	M.RESISTOR CH 2W 1.2K	1	
RA2201	EXBV8V331J	COMBI.R-R 330	1	
RA2203	EXBV4V102J	COMBI.R-R 1K	1	
		MISCELLANEOUS		
	VMZ2889	INSULATION SHEET	1	
■	VEP00Y65A	LCD/IF P.C.BOARD	1	(RTL)
C1034	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3501	ECST0JD107Z	T.CAPACITOR CH6.3V 100U	1	
*C3503	ECST0JD107Z	T.CAPACITOR CH6.3V 100U	1	
FP3501	VJS3320B018	CONNECTOR (FEMALE)	1	
FP3502,03	VJS3320D016	CONNECTOR (FEMALE)	2	
LB3501-04	VLP0157	COIL	4	
LB3505-07	VLP0155	COIL	3	
LB3508,09	VLF1143A102	FILTER	2	
LB3510-14	VLP0157	COIL	5	

VEP00Y65A / VYK7917 / VEP28240C / VEP28244A / VEP04674B

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
PS3501	VJS3636	CONNECTOR (FEMALE)	1	
PS3502	VJS3989A070	CONNECTOR (FEMALE)	1	
R3501, 02	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	2	
■	VYK7917	TOP OPERATION P. C. BOARD	1	(RTL)
S6801-04	EVQQW101M	SWITCH	4	
		MISCELLANEOUS		
	VSR0224	MULTI FUNCTION DIAL	1	
■	VEP28240C	E. V. F. (A) P. C. BOARD	1	(RTL)
BL881	VLL0203	BACK LIGHT	1	
Q881	2SK1299-3S	TRANSISTOR	1	
R881	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
T881	ETJ09K31AM	TRANSFORMER	1	
■	VEP28244A	E. V. F. (B) P. C. BOARD	1	(RTL)
C801	ECUM1A335KBP	C. CAPACITOR CH 10V 33U	1	
C802	ECGC1BB150	C. CAPACITOR 12V 15P	1	
C827	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C829	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C830	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C832	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C833	ECST1CY225Z	T. CAPACITOR CH 16V 2.2U	1	
C834-37	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	4	
C838, 39	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	2	
C865, 66	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
D801	MA338	DIODE	1	
D803	1SS355	DIODE	1	
FP801	VJS3319B018	CONNECTOR (FEMALE)	1	
FP802	VJS3319B016	CONNECTOR (FEMALE)	1	
IC802	ET2070F0C	IC	1	
IC805	TA75S558F	IC	1	
L801	VLQ0426J6R8	COIL	1	
L803-05	VLQ0807K100	COIL 10UH	3	
L881	VLQ0779K100	COIL 10UH	1	
R802	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R805	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R807, 08	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R832	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R834	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R835	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R836	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R841	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R849	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R850	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R851	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R852	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R878, 79	ERJ3RBD183	M. RESISTOR CH 3W 18K	2	
R880	ERJ3RBD332	M. RESISTOR CH 3W 3.3K	1	
W802	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
■	VEP04674B	FRONT P. C. BOARD	1	(RTL)
C4801	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C4802	ECUM1E823KBN	C. CAPACITOR CH 25V 0.082U	1	
C4804	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C4805	ECUM1H473KBN	C. CAPACITOR CH 50V 0.047U	1	
C4806	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C4807	ECUM1E823KBN	C. CAPACITOR CH 25V 0.082U	1	
C4808	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C4809	ECUM1H473KBN	C. CAPACITOR CH 50V 0.047U	1	
C4814	ECUX1H822KBV	C. CAPACITOR CH 50V 8200P	1	
C4816	ECUX1H822KBV	C. CAPACITOR CH 50V 8200P	1	
C4817	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	1	
C4830	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	1	
C4901, 02	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	2	
C4903	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C4905	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	1	
C4908	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C4910, 11	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	2	
C4914	ECUX1C823KBV	C. CAPACITOR CH 16V 0.082U	1	
C4916	ECUX1C823KBV	C. CAPACITOR CH 16V 0.082U	1	
C6401	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C6402	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
D6801	CL150UR	DIODE	1	
D6802	PH310	DIODE	1	
FL4901	VLF1339B306	FILTER	1	
FL4902	VLF1341B306	FILTER	1	
FP4801	VJS3452A013	CONNECTOR (FEMALE)	1	
IC4801	NJM2112V	IC	1	
IR6401	VEK8057	SENSOR	1	
JK4801	VJJ0414	MIC JACK	1	
Q4805	2SD2216	TRANSISTOR	1	
Q4810, 11	2SD2216	TRANSISTOR	2	
Q4901	2SD2216	TRANSISTOR	1	
Q4902	2SB1462	TRANSISTOR	1	
Q4903	2SD2216	TRANSISTOR	1	
Q4904	2SB1462	TRANSISTOR	1	
Q4905	2SD2216	TRANSISTOR	1	
QR4903, 04	MRN1103	TRANSISTOR	2	
R4801-03	ERJ6GEYG392	M. RESISTOR CH 1/10W 3.9K	3	
R4805	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R4806	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R4807	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R4808	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R4809-12	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	4	
R4814	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R4815, 16	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	2	
R4818	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R4823	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R4824	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R4839	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4861	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4864	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4905	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	

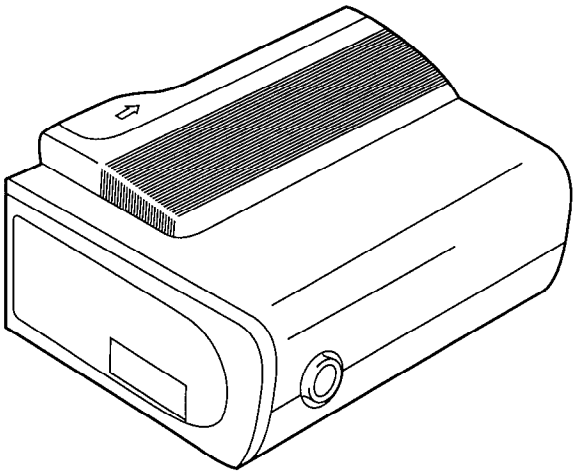
VEP04674B / VEP06C16A / VEP05352A / VEP22265A

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4906	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4907	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R4908	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4909	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R4910	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4911	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R4912	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R4913	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4914	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R4915	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4916	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R4917	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4918	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R4919	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R4924	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R4925	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4926	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4928	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R4929	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4930	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4998	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6803	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
		MISCELLANEOUS		
	VSC4648	MIC SHIELD COVER (A)	1	
	VSC4649	MIC SHIELD COVER (B)	1	
■	VEP06C16A	REAR OPERATION P.C.BOARD	1	(RTL)
B6701	VL2020/1HF	BATTERY	1	
D6701	CL150YG-CD	IC	1	
D6702	CL150UR	DIODE	1	
FP6701	VJS3320D016	CONNECTOR (FEMALE)	1	
FP6702	VJS3320B005	CONNECTOR (FEMALE)	1	
R6701	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
S6701	ESE103119	SWITCH	1	
S6702	VMG0763	SWITCH	1	
S6703	EVQPA401K	SWITCH	1	
S6704	ESD165236	SWITCH	1	
■	VEP05352A	HEAD AMP PC.BOARD	1	(RTL)
C5001,02	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	2	
C5004	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C5007	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C5010	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C5013	ECUX1E152KBQ	C.CAPACITOR CH 25V 1500P	1	
C5014	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C5015	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C5016	ECUX1H330JCQ	C.CAPACITOR CH 50V 33P	1	
C5017	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C5018	ECUX1H150JCQ	C.CAPACITOR CH 50V 22P	1	
C5019	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C5020,21	EEJK0JS106	E.CAPACITOR 6.3V 10M	2	
C5023,24	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	2	
C5025	EEJK0JS106	E.CAPACITOR 6.3V 10M	1	
C5026	ECUX1E152KBQ	C.CAPACITOR CH 25V 1500P	1	
C5027	ECUX1H330JCQ	C.CAPACITOR CH 50V 33P	1	
C5028	ECUX1E122KBQ	C.CAPACITOR CH 25V 1200P	1	
C5029	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5030	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	1	
C5031	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C5032	ECUX1H470JCQ	C.CAPACITOR CH 50V 47P	1	
C5033	ECUX1E681KBQ	C.CAPACITOR CH 25V 680P	1	
C5034	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	1	
C5035-37	EEJK0JS106	E.CAPACITOR 6.3V 10M	3	
C5038-40	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.001U	3	
FP5001	VJS3320B008	CONNECTOR (FEMALE)	1	
IC5001	AN3731FHQ	IC	1	
L5002,03	VLQ0808J220	COIL 22UH	2	
L5005	VLQ0807M4R7	COIL 4.7UH	1	
L5007	VLQ0807M4R7	COIL 4.7UH	1	
Q5002,03	2SC3937	TRANSISTOR	2	
Q5005,06	2SD1819A	TRANSISTOR	2	
R5002	ERJ2GEJ471	M.RESISTOR CH 2W 470	1	
R5003	ERJ2GEJ103	M.RESISTOR CH 2W 10K	1	
R5004	ERJ2GE0R00	M.RESISTOR CH 2W 0	1	
R5005	ERJ2GEJ102	M.RESISTOR CH 2W 1K	1	
R5010	ERJ2GEJ680	M.RESISTOR CH 2W 68	1	
R5012	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R5013	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R5014,15	ERJ2GEJ271	M.RESISTOR CH 2W 270	2	
R5016,17	ERJ2GEJ102	M.RESISTOR CH 2W 1K	2	
R5018	ERJ2GEJ680	M.RESISTOR CH 2W 68	1	
R5019	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R5020	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R5021	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R5024	ERJ2GEJ103	M.RESISTOR CH 2W 10K	1	
R5025	ERJ2GEJ271	M.RESISTOR CH 2W 270	1	
R5026	ERJ2GE0R00	M.RESISTOR CH 2W 0	1	
R5028	ERJ2GEJ152	M.RESISTOR CH 2W 1.5K	1	
R5029	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
		MISCELLANEOUS		
	VSC4639	SHIELD COVER	1	AG-EZ10E
■	VEP22265A	CCD FLEX. CARD P.C.BOARD	1	(RTL)
		MISCELLANEOUS		
	VJB22265	FLEX. CARD	1	

AC ADAPTOR

VW-AD3E



SPECIFICATIONS

ITEM	SPECIFICATION
POWER	Source: AC 100– 240 V, 50– 60 Hz
	Consumption: 20 W
	Output: DC 7.9 V, 11 W (Movie Camera Operation) DC 7.9 V, 1.2 A (Battery Charging)
OPERATING TEMPERATURE	0 ~ 40°C
OPERATING HUMIDITY	10~ 80%
DIMENSIONS	72 (W)×43 (H)×98 (D) mm
WEIGHT	170 g

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

CAUTION: FOR USE WITH DIGITAL VIDEO CAMERA RECORDER, MODEL AG-EZ10E, AG-EZ30E.
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

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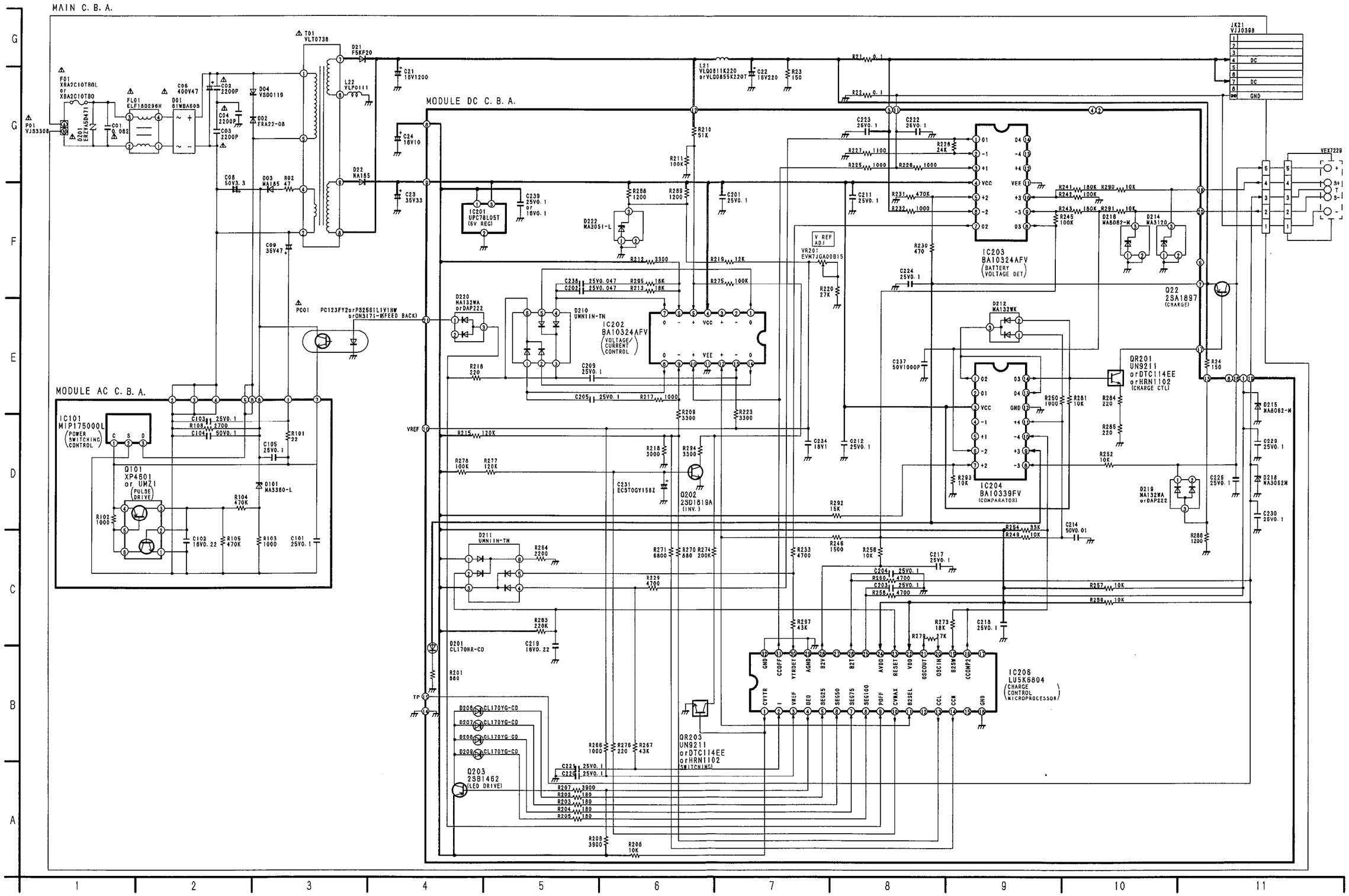
   ❷ PACKING & ACCESSORIES SECTION 6
4. ELECTRICAL REPLACEMENT PARTS LIST 7

1.AC ADAPTOR SCHEMATIC DIAGRAM

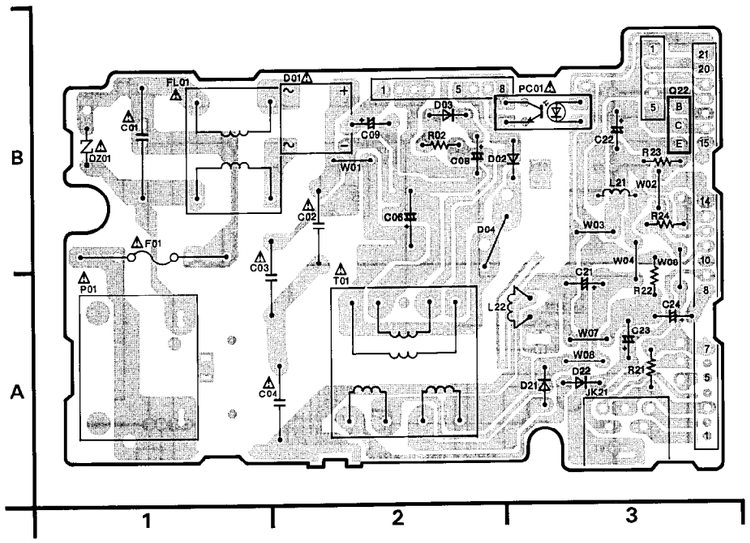


2. AC ADAPTOR CIRCUIT BOARD DIAGRAM

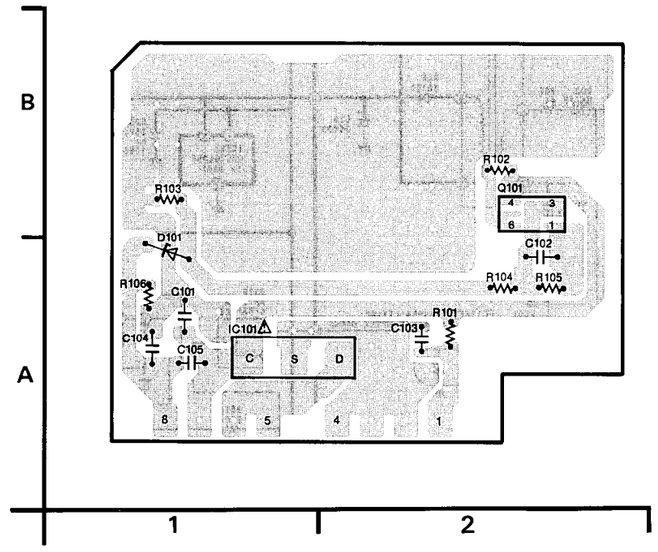
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

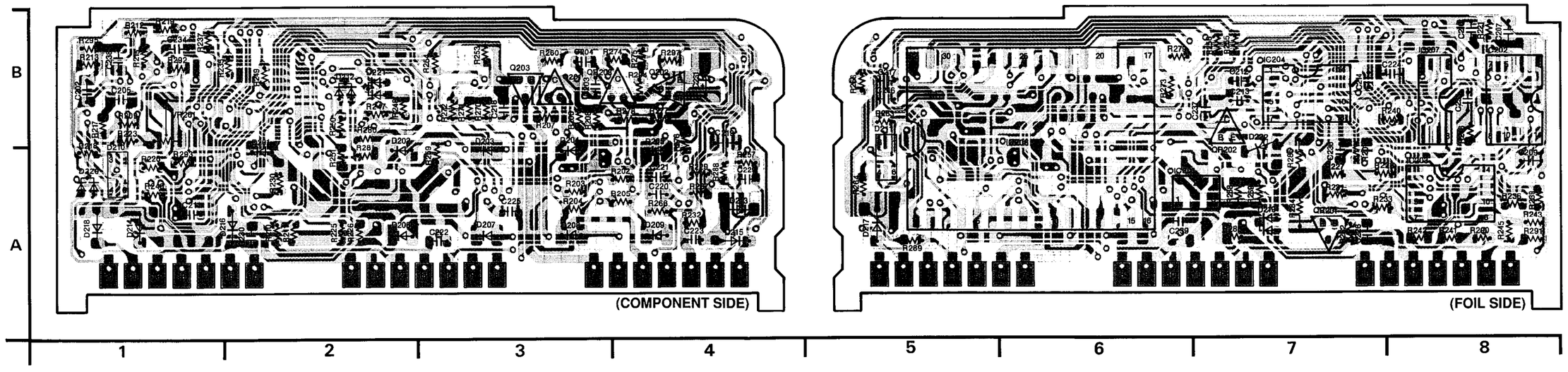
MAIN C.B.A. (VEP61257A)



MODULE AC C.B.A. (VEP60530A)

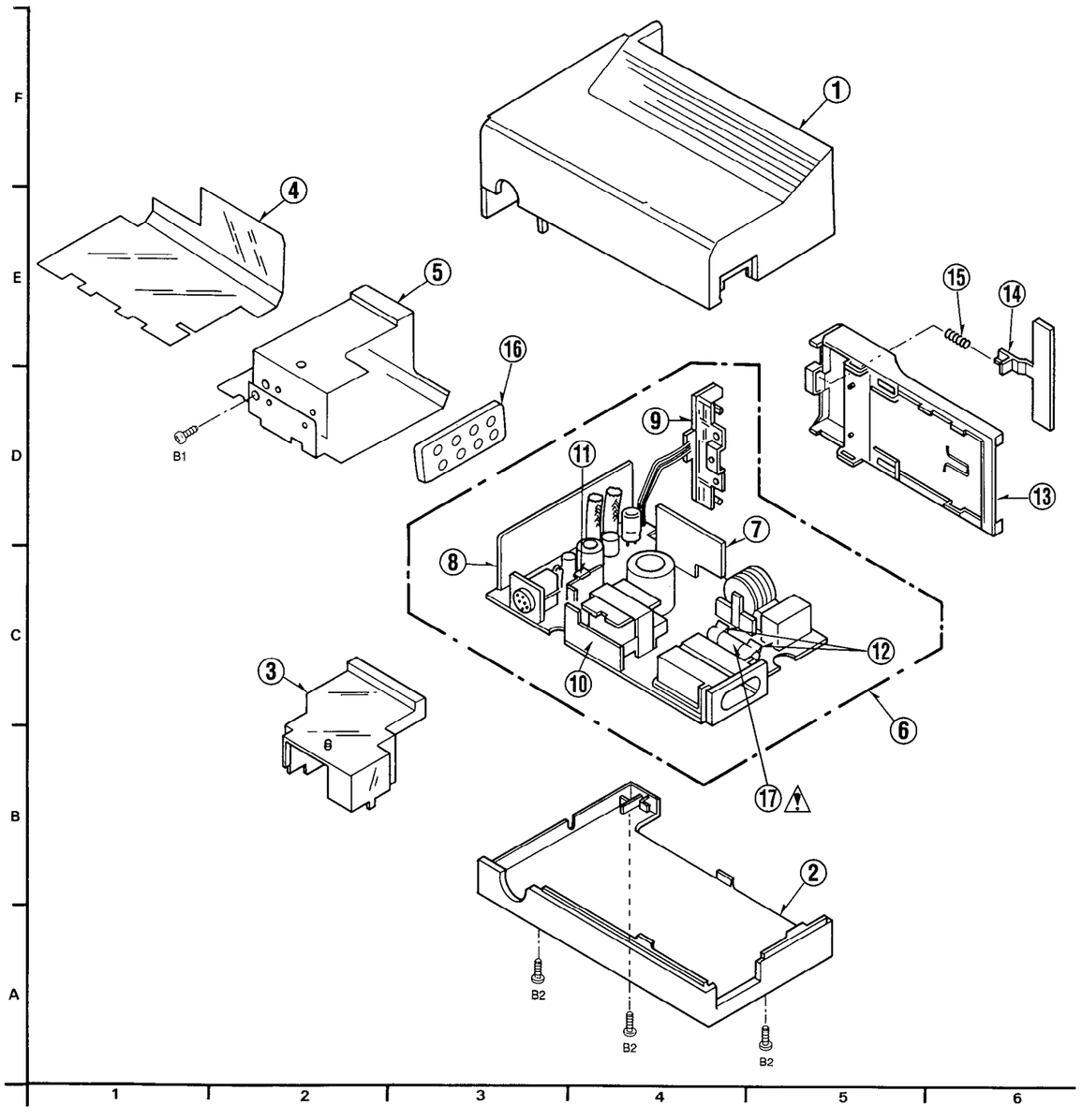


MODULE DC C.B.A. (VEP60531C)



3. EXPLODED VIEWS & MECHANICAL REPLACEMENT PARTS LIST

❶ AC ADAPTOR SECTION

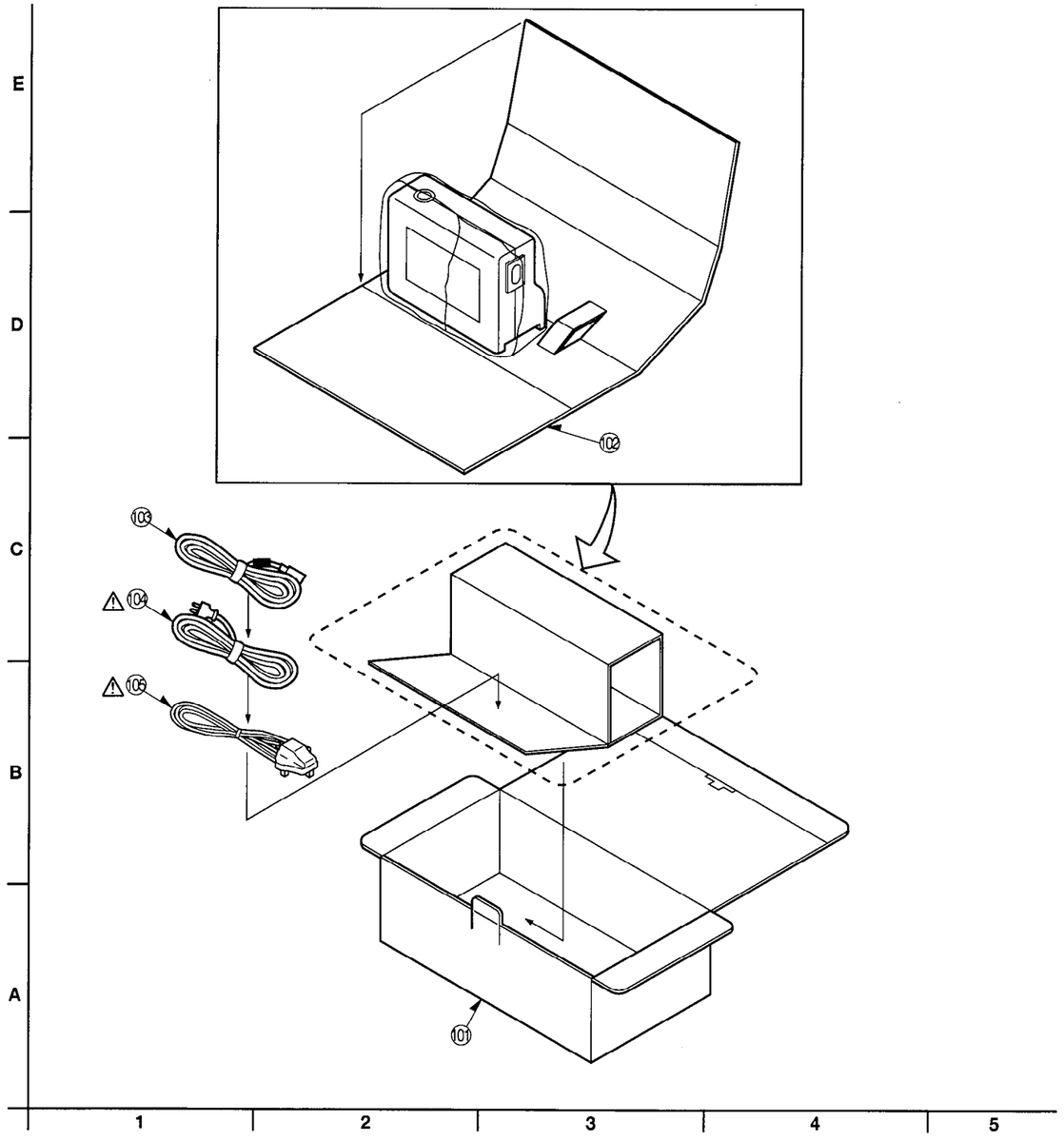


Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VYK7839	TOP CASE	1	
2	VKM3968	BOTTOM CASE	1	
3	VMZ2290	BARRIER (UPPER)	1	
4	VMZ2291	BARRIER (LOWER)	1	
5	VSC4086	SHIELD CASE	1	
6	VEP61257A	MAIN P. C. BOARD	1	
7	VEP60530A	MODULE AC P. C. BOARD	1	
8	VEP60531C	MODULE DC P. C. BOARD	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
9	VEK7229	BATTERY CATCHER	1	
10	VSC4104	HEAT SINK	1	
11	VMC0661	TR SUPPORT SPRING	1	
12	VJF1013	FUSE HOLDER (N)	2	
13	VKM4048	HOLDER	1	
14	VKF2288	SHUTTER	1	
15	VMB2767	SPRING	1	
16	VMX2365	EXPRESSION FRAME	1	
⚠ 17	XBA2C10TB0L	FUSE	1	
B1	XSB2+4FZ	SCREW	1	
B2	XTB2+8GFZ	SCREW	3	

❷ PACKING & ACCESSORIES SECTION



Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
101	VPG8522	PACKING CASE	1	
102	VPN4489	PAD	1	
103	VEK8226	DC CABLE ASS'Y	1	
⚠ 104	VJA0998	AC CORD	1	
⚠ 105	VJA0940	AC CORD	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks

4. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE : Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS(uf), P=uuF.
4. The P.C. Board units marked width " ■ " show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

VEP61257B / VEP60530A / VEP60531F

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP61257B	MAIN P.C.BOARD	1	(RTL)
■	VEP60530A	MODULE AC P.C.BOARD	1	FOR VEP61257B
■	VEP60531F	MODULE DC P.C.BOARD	1	FOR VEP61257B
⚠ F01	XBA2C10TB0L	FUSE	1	
■	VEP61257B	MAIN P.C.BOARD	1	(RTL)
■	VEP60530A	MODULE AC P.C.BOARD	1	FOR VEP61257B
■	VEP60531F	MODULE DC P.C.BOARD	1	FOR VEP61257B
⚠ C01	ECQU2A823MVA	P.CAPACITOR 100V 0.082U	1	
⚠ C02-04	ECKFRS222ME	C.CAPACITOR 2200P	3	
C06	ECA2GG470Y	E.CAPACITOR 400V 47U	1	
C08	ECA1HFG3R3	E.CAPACITOR 50V 3.3U	1	
C09	ECEA1VGE470	E.CAPACITOR 35V 47U	1	
C21	EEUFA1C122BQ	E.CAPACITOR 16V 1200U	1	
C22	ECEA1CGE221	E.CAPACITOR 16V 220U	1	
C23	ECEA1VGE330	E.CAPACITOR 35V 33U	1	
C24	ECEA1CKG100	E.CAPACITOR 16V 10U	1	
C101	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C102	ECUX1C224KBN	C.CAPACITOR CH 16V 0.22U	1	
C103	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C104	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C105	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C201	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C202	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C203, 04	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C205	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C209	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C211, 12	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C214	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C217, 18	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C219	ECUX1C224KBN	C.CAPACITOR CH 16V 0.22U	1	
C220-24	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C226	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C229, 30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C231	ECST0GY156Z	T.CAPACITOR CH6.3V 15U	1	
C234	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C237	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C238	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C239	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
⚠ D01	S1WBA60S	DIODE	1	
D02	ERA22-08	DIODE	1	
D03	MA185	DIODE	1	
D04	VSD0119	DIODE	1	
D21	F5KF20	DIODE	1	
D22	MA185	DIODE	1	
D101	MA3360-L	DIODE	1	
D201	CL170HR-CD	DIODE	1	
D206-09	CL170YG-CD	DIODE	4	
D210, 11	UMN11N	DIODE	2	
D212	MA132WK	DIODE	1	
D214	MA3120	DIODE	1	
D215, 16	MA8082-M	DIODE	2	
D218	MA3062M	DIODE	1	
D219, 20	MA132WA	DIODE	2	
D222	MA3051-L	DIODE	1	
⚠ DZ01	ERZVA5D471	DIODE	1	
⚠ FL01	ELF18D296H	COIL	1	
IC101	MIP17500DL	IC	1	
IC201	UPC78L05T	IC	1	
IC202, 03	BA10324AFV	IC	2	
IC204	BA10339FV	IC	1	
IC206	LU5K6B24	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
JK21	VJJ0398	DC JACK	1	
L21	VLQ0611K220	COIL 22U	1	
L22	VLP0111	COIL	1	
⚠ P01	VJS3306	CONNECTOR (FEMALE)	1	
⚠ PC01	PC123FY2	PHOTO COUPLER	1	
Q22	2SA1897	TRANSISTOR	1	
Q101	XP4601	TRANSISTOR-RESISTOR	1	
Q202	2SD1819A	TRANSISTOR	1	
Q203	2SB1462	TRANSISTOR	1	
QR201	UN9211	TRANSISTOR-RESISTOR	1	
QR203	UN9211	TRANSISTOR-RESISTOR	1	
R02	ERDS2TJ470	C.RESISTOR 1/4W 47	1	
R21	ERX1SZJR10	M.RESISTOR 1W 0.1	1	
R22	ERX1SZGR10	M.RESISTOR 1W 0.1	1	
R23	ERG2SJ151	M.RESISTOR 2W 150	1	
R24	ERG1SJ151	M.RESISTOR 1W 150	1	
R101	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R102, 03	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R104, 05	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	2	
R106	ERJ3GEYJ272V	M.RESISTOR CH 1/16W 2.7K	1	
R201	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R202-05	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	4	
R206, 07	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	2	
R208	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R209	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R210	ERJ3RBD513	M.RESISTOR 3W 51K	1	
R211	ERJ3RBD104	M.RESISTOR CH 3W 100K	1	
R212	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R213	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R215	ERJ3RED124	M.RESISTOR CH 3W 120K	1	
R216	ERJ3RBD302	M.RESISTOR CH 3W 3K	1	
R217	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R218	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R219	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R220	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R223	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R225, 26	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R227	ERJ3RBD112	M.RESISTOR CH 3W 1.1K	1	
R228	ERJ3RBD243	M.RESISTOR CH 3W 24K	1	
R229	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R230	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R231	ERJ3GEYG474	M.RESISTOR CH 1/16W 470K	1	
R232	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R233	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R241	ERJ3RED184	M.RESISTOR CH 3W 180K	1	
R242	ERJ3RBD104	M.RESISTOR CH 3W 100K	1	
R243	ERJ3RED184	M.RESISTOR CH 3W 180K	1	
R245	ERJ3RBD104	M.RESISTOR CH 3W 100K	1	
R246	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R249	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R250	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R252	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R254	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R256, 57	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R258	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R259	ERJ3RBD103	M.RESISTOR CH 3W 10K	1	
R260	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R263	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R264	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R266	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R267	ERJ3GEYJ433	M.RESISTOR CH 1/16W 43K	1	
R268, 69	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R270	ERJ3RBD681	M.RESISTOR CH 3W 680	1	
R271	ERJ3RBD682	M.RESISTOR CH 3W 6.8K	1	
R273	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R274	ERJ3RED204	M.RESISTOR CH 3W 200K	1	
R275	ERJ3RBD104	M.RESISTOR CH 3W 100K	1	
R276	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R277	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	

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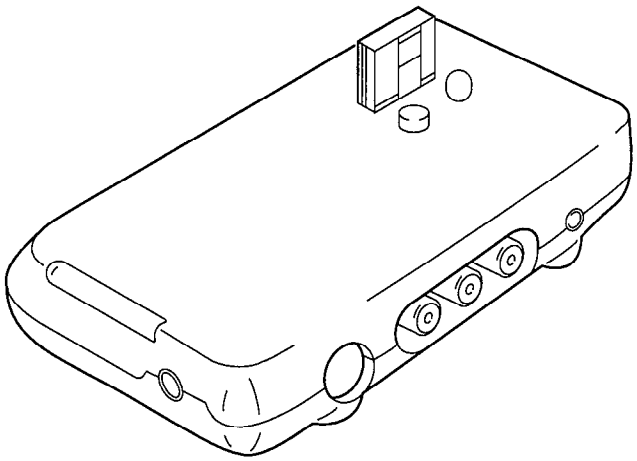
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R278	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R279	ERJ3RBD273	M.RESISTOR CH 3W 27K	1	
R281	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R284, 85	ERJ8GEYJ221	M.RESISTOR CH 1/8W 220	2	
R286	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R290, 91	ERJ3RBD103	M.RESISTOR CH 3W 10K	2	
R292	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R293	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R294	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R295	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R297	ERJ3GEYJ433	M.RESISTOR CH 1/16W 43K	1	
⚠ T01	VLT0738	TRANSFORMER	1	
VR201	EVM7JGA00B15	V.RESISTOR 100K	1	
		MISCELLANEOUS		
⚠	VJF1013	FUSE HOLDER	2	
	VEK7229	BATTERY CATCHER	1	
	VSC4104	HEAT SINK	1	
	VMC0661	TRANSISTOR HOLDER	1	
	VJR0754	CONNECTOR	19	FOR VEP60530A
	VJR0754-	CONNECTOR	32	FOR VEP60531F

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

OUTPUT TERMINAL BOX



CAUTION: FOR USE WITH DIGITAL VIDEO CAMERA RECORDER, MODEL AG-EZ10E, AG-EZ30E.
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

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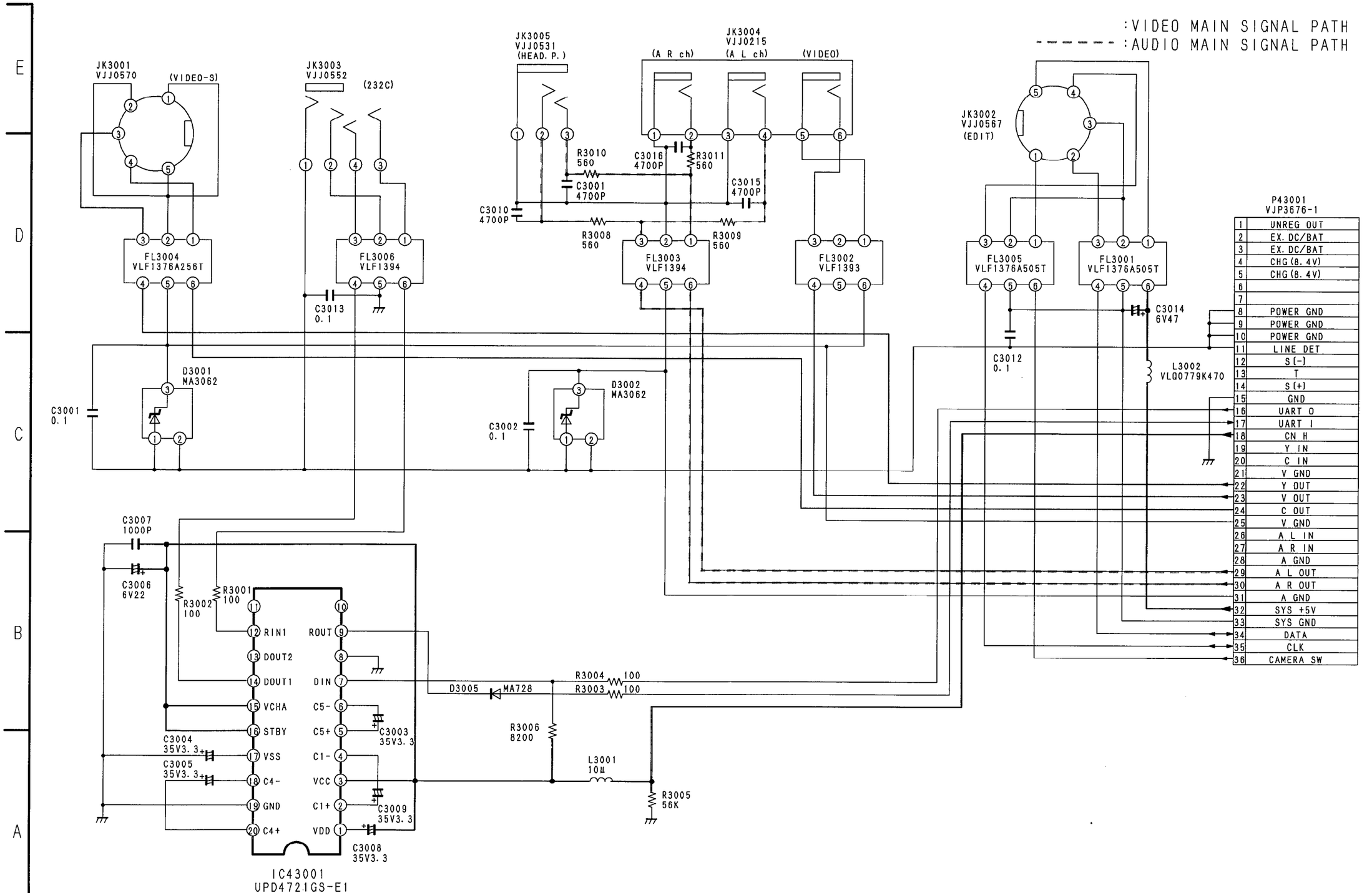
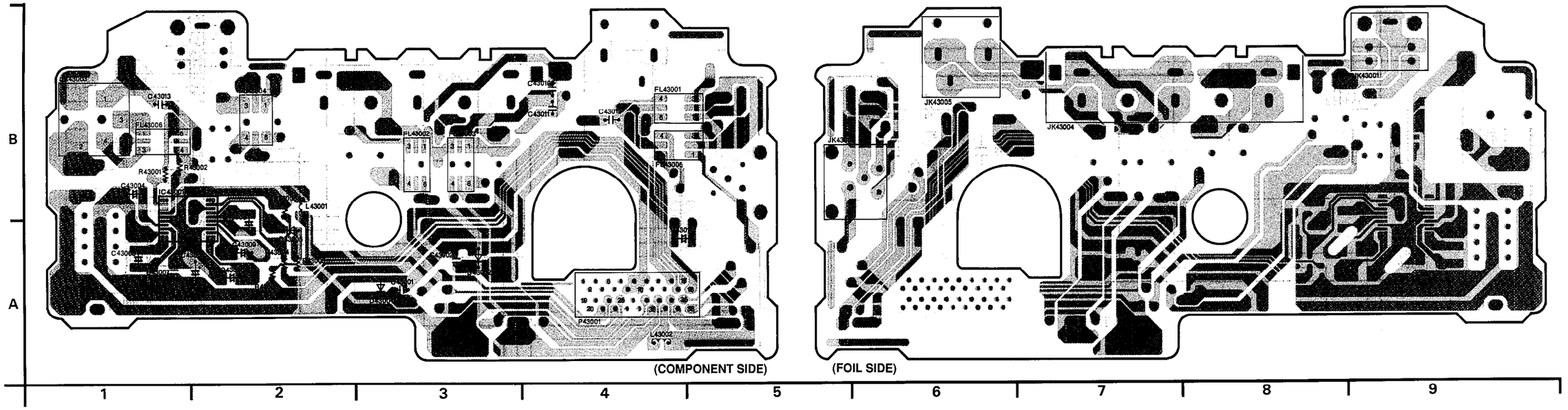
2. OUTPUT TERMINAL BOX CIRCUIT BOARD DIAGRAM..... 3
3. EXPLODED VIEWS & MECHANICAL REPLACEMENT PARTS LIST 4
4. ELECTRICAL REPLACEMENT PARTS LIST..... 6

1. OUTPUT TERMINAL BOX SCHEMATIC DIAGRAM

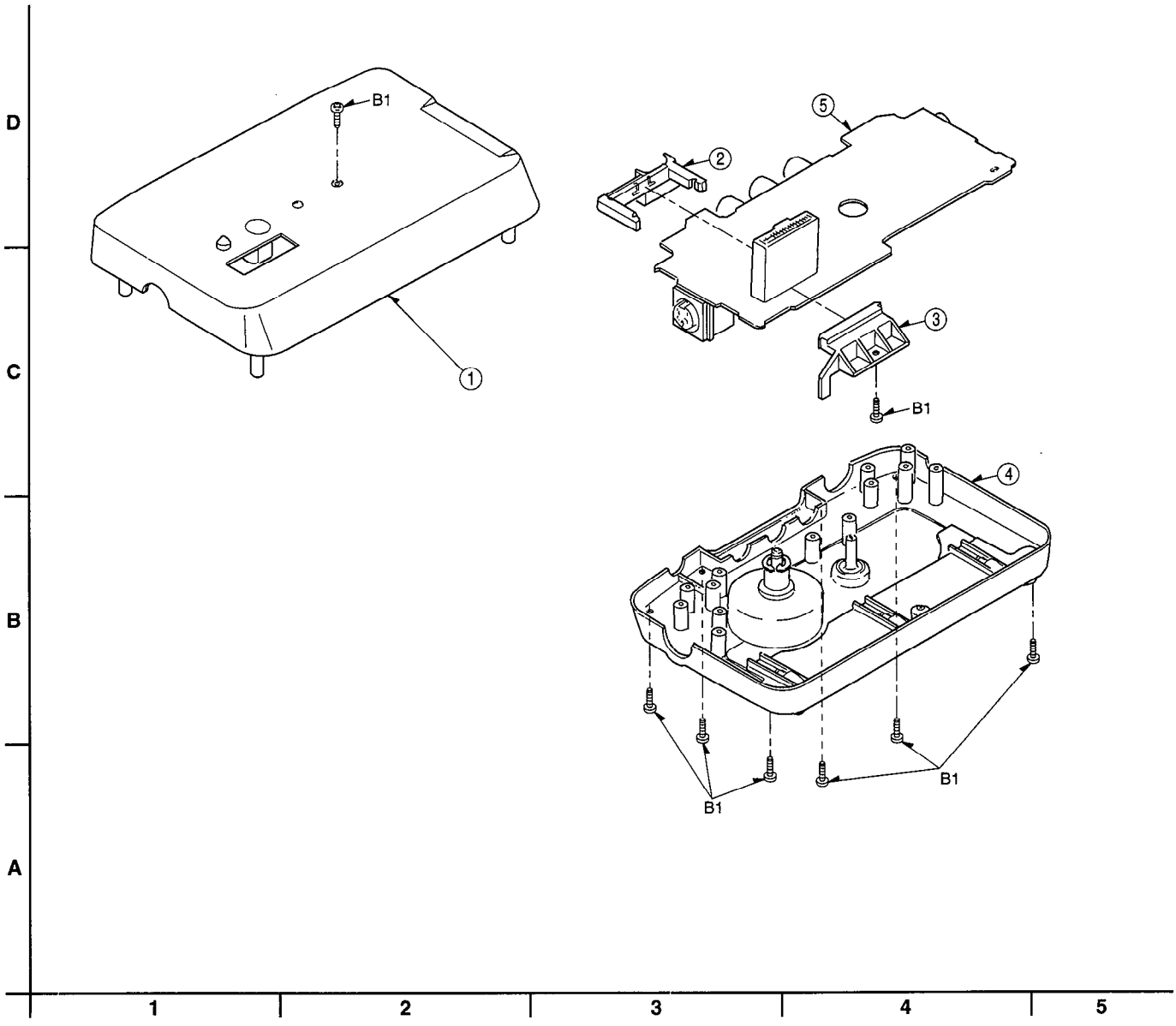


REF. NO. 40000 SERIES.

2. OUTPUT TERMINAL BOX CIRCUIT BOARD DIAGRAM



3. EXPLODED VIEWS & MECHANICAL REPLACEMENT PARTS LIST



Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VKM4770	TOP CASE	1	
2	VGQ4458	HOLDER A	1	
3	VGQ4457	HOLDER B	1	
4	VYK7872	BOTTOM CASE	1	
5	VEP63203A	OUTPUT TERMINAL BOX P.C.B	1	
B1	XTB2+8GFZ	SCREW	8	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks

4. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE : Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS(uf), P=uuF.
4. The P.C. Board units marked width " ■ " show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP63203A	TERMINAL BOX P. C. BOARD	1	(RTL)
■	VEP63203A	TERMINAL BOX P. C. BOARD	1	(RTL)
C43001, 02	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C43003-05	ECST1VX335Z	T. CAPACITOR CH 35V 3.3U	3	
C43006	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	1	
C43007	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C43008, 09	ECST1VX335Z	T. CAPACITOR CH 35V 3.3U	2	
C43010, 11	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	2	
C43012, 13	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C43014	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
C43015, 16	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	2	
D43001, 02	MA3062	DIODE	2	
D43005	MA728	DIODE	1	
FL43001	VLF1376A505	FILTER	1	
FL43002	VLF1393	FILTER	1	
FL43003	VLF1394	FILTER	1	
FL43004	VLF1376A256	FILTER	1	
FL43005	VLF1376A505	FILTER	1	
FL43006	VLF1394	FILTER	1	
IC43001	UPD4721GS	IC	1	
JK43001	VJJ0570	JACK	1	
JK43002	VJJ0567	JACK	1	
JK43003	VJJ0552	JACK	1	
JK43004	VJJ0215	RCA PIN JACK	1	
JK43005	VJJ0531	HEADPHONE JACK	1	
L43001	VLQ0319K100	COIL 10UH	1	
L43002	VLQ0779K470	COIL 47UH	1	
P43001	VJP3676	CONNECTOR (MALE) 36P	1	
R43001-04	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R43005	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R43006	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R43008-11	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	4	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks

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H27109802STKPK1